ABSTRACT

Title: RACE, NEIGHBORHOOD DISADVANTAGE, AND RETALIATORY HOMICIDE

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Criminologists have long struggled to explain the concentration of violence among economically disadvantaged minorities. Anderson ethnographically develops an explanation of violent behavior among blacks in economically disadvantaged neighborhoods. He argues that because these individuals are isolated from mainstream institutions and lack faith in the criminal justice system, they live by a "code of the street" in which violence is used as a tool to maintain respect among peers and deter aggression. The present research is designed to determine whether patterns of homicide in Chicago from 1985 to 1995 support Anderson's theory. I use data on characteristics of homicide offenders and U.S. Census data from 1990 for measures of neighborhood disadvantage at the census tract level. The results generally support Anderson's theory in that homicides committed by blacks and in neighborhoods with greater disadvantage are more likely to be retaliatory than homicides committed by whites and in neighborhoods with less disadvantage.

RACE, NEIGHBORHOOD DISADVANTAGE, AND RETALIATORY HOMICIDE

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Chapter One: Introduction

Crime data consistently reveal disproportionately high rates of homicide committed both by and against racial minorities and the economically disadvantaged. For example, the 2000 United States Census reports that blacks and African Americans represent 12.3 percent of the population (U.S. Census Bureau, 2001, Table 1), but according to the United States Uniform Crime Report for the same year (FBI, 2000), blacks accounted for 48.8 percent of arrests for murder and nonnegligent manslaughter (Table 43) and made up 47.8 percent of all murder victims (Table 2.4). Homicide continues to be the leading cause of death for black men and women between the ages of 15 and 34 (Centers for Disease Control, 2002: 27-28). Furthermore, the data indicate that homicide victims and their offenders are most often non-strangers (Decker, 1993; FBI, 2003; Kubrin and Weitzer, 2003; Lundsgaarde, 1977; Wolfgang, 1958).

Attempts to explain patterns of homicide frequently fail to account for these particular trends because they tend to be limited on two dimensions. The first dimension represents the extent to which a theory focuses strictly on situational variables or on background variables. The second dimension represents the extent to which a theory prioritizes structural variables or cultural variables. I will briefly elaborate upon each of these in turn.

Although it seems intuitive to examine motive when searching for causes of crime, many theorists disregard altogether incident-level motivations to commit crime. For example, differential association, social disorganization, and social control theories each suggest that external variables in an individual's background, either at the macro or micro level, determine his likelihood of offending. Antecedent variables are likely to be

important to an explanation of offending. However, these three theories ignore almost entirely variation in the cultural, structural and emotional dynamics that give meaning to the incident at the situational level. Conversely, theories that do consider situational variables such as deterrence, rational choice, and routine activities theories frequently suffer from the opposite problem: a lack of consideration of background variables influencing the likelihood that a person will offend. An informative theoretical explanation of crime should consider characteristics of both background variables and situational variables.

In addition, theories of crime that are limited to consideration of either structural or cultural factors often fail to account for the concentration of violence among minorities and the poor. It is apparent that structure or culture alone does not adequately explain patterns of offending. Instead, it is the interaction between structure and culture that is most informative (Heimer, 1997; Kubrin and Weitzer, 2003; Matsueda et al., 1992; Sampson and Wilson, 1995).

In *Code of the Street*, an ethnographic study of street life in Philadelphia, Anderson (1999) develops a theory to account for high levels of violence among disadvantaged blacks that bridges the gap on each of these dimensions. He does not limit his observations in to structural variables or to cultural variables. Nor does he focus entirely on background variables, ignoring the significance of situational interaction. Instead, he considers the roles of both structural and cultural variables as well as both background and situational variables immediate to an offense.

Anderson's (1999) explanation hinges on the need for individual respect in an inner-city neighborhood and the role retaliation plays in gaining that respect. He

observes a "code of the street" that develops among inner-city blacks who, lacking faith in conventional institutions of justice, feel a need to protect themselves from potential threats (1999: 9). In this setting, violence is often the result of an individual responding to an offense or even merely an insult. The perceived or real inability to rely on the police for protection gives rise to a subculture in which the use of violence to defend honor is a means of informal social control. On the part of the offender the violent response is not only justified (see Katz, 1988: 12 "righteous slaughter") but required (Anderson, 1999; Black, 1983; Nisbett and Cohen, 1996). Violence is used to build a reputation of strength, or at least dispel the appearance of weakness, and deter future aggression.

Sampson and Wilson characterize the state of research on race and crime as "mired in an unproductive mix of controversy and silence" (1995: 37). Furthermore, very few studies address the issue of retaliation as a motive for violence, as characterized by Anderson (1999). Those that do have in common a lack of attention to the race of the offender and the interaction between offender race and neighborhood disadvantage. The present study is designed to address this gap in the literature by testing Anderson's (1999) theory that high rates of violence among disadvantaged blacks are largely a result of the retaliatory norms of the code of the street.

In Chapter Two I address two theoretical considerations important to this topic. One is the status of symbolic interaction principles with respect to theories of violence. The second is the assertion that informative criminological theories should consider both structural and cultural predictors of crime. In Chapter Three I review the relevant theoretical and empirical literature. Anderson's (1999) observations in *Code of the Street* synthesize many themes already found in criminological theory. I have grouped the

literature that informs *Code of the Street* into two categories. First, I discuss literature relating to race, crime, and the criminal justice system, with particular attention to the role of neighborhood disadvantage. Then I review the theoretical literature on retaliation as a motive for crime, particularly violence. Additionally, I elaborate on *Code of the Street* (Anderson, 1999) and the existing empirical research that assesses Anderson's theory. Note that although *Code of the Street* does not include all the elements of a formal theory, for convenience I refer to it as a theory throughout because it does allow for the development of testable hypotheses. In Chapter Four I explain the data and methods used in the present research. The data I use are from the 1990 United States Census and the Chicago Homicide Project, including all homicides in Chicago between 1985 and 1995. This chapter includes a discussion of the strengths and limitations of the data, including potential problems caused by disaggregating homicide data in research. I conclude Chapter Four with an explanation of how I test Anderson's (1999) theory by estimating the relationships between race, neighborhood disadvantage and retaliatory homicide. In Chapter Five I present the results of bivariate analyses of the differences between retaliatory and non-retaliatory homicides and the logistic regression models used to estimate these relationships. Finally, in Chapter Six I offer a discussion of the results and their implications for theory, policy, and future research.

Chapter Two: Theoretical Considerations

Before reviewing the literature relevant to Anderson's (1999) *Code of the Street* I will discuss two theoretical considerations relevant to the theory. First, principles of symbolic interaction are noticeably absent from most criminology theories. Yet several researchers and theorists (Anderson, 1999; Becker, 1953; Birkbeck and LaFree, 1993; Katz, 1988; Luckenbill, 1977; Lundsgaarde, 1977; Wolfgang, 1958) illustrate how the social construction of meaning between offenders and victims plays an important role in the understanding of crime, particularly violence. Second, the interdependency of structural and cultural variables suggests that both are crucial to an effective theory of crime (Kubrin and Weitzer, 2003; Matsueda et al., 1992; Sampson and Wilson, 1995).

Violence and Symbolic Interaction

Perhaps the quintessential application of symbolic interaction principles to deviance is Becker's "Becoming a Marihuana User" (1953). Having conducted field interviews with fifty marijuana users, Becker describes use of marijuana as a process that takes place as the user learns how to conceptualize the experience as pleasurable. This process cannot occur independent of the social context that constructs the meaning of the activity. He argues that attempts to find traits or characteristics that cause or predispose an individual to use marijuana are futile and inefficient. According to Becker, the real motive for using marijuana develops during the experiential process of learning to do so correctly, regardless of the user's background characteristics. He concludes, "...behavior of any kind might fruitfully be studied developmentally, in terms of changes in meanings

and concepts, their organization and reorganization, and the way they channel behavior, making some acts possible while excluding others" (242).

Like Becker (1953), Katz (1988) observes, "the study of crime has been preoccupied with a search for background forces, usually defects in the offenders' psychological backgrounds or social environments, to the neglect of the positive, often wonderful attractions within the lived experience of criminality" (3). Several theorists (Becker, 1953; Birkbeck and LaFree, 1993; Katz, 1988) point out that by ignoring the subjective interpretation of a situation, existing criminological theory fails to account for two important facts. First, those deemed likely to commit crime do not always do so. Second, those deemed unlikely to commit crime sometimes do. Furthermore, even when deterministic theories correctly identify an offender they often fail to explain individual patterns of offending (Katz, 1988). To avoid this pitfall, theorists must appreciate the significance of interaction itself and the meaning individuals attribute to it.

Several researchers and theorists (Anderson, 1999; Katz; 1988; Luckenbill, 1977; Lundsgaarde, 1977) observe the same symbolism in cases of interpersonal violence that Becker (1953) observes among marijuana users. Wolfgang's (1958) early work on the relationships between victims and offenders identified the patterns in victim-offender relationships in criminal homicide and also classified the motives. His finding that 78.6% of all victim-offender relationships involve a close friend, family member, acquaintance or paramour have been used to support various criminological theories including Black's (1983) theory of self-help, routine activities theory (Cohen and Felson, 1979), and Wolfgang and Ferracuti's (1967) subculture of violence theory. The realization that offenders and victims of criminal homicide frequently know each other

sheds light on the importance of the situational aspects of the incident. It suggests that the nature of violent incidents may be derived in part from the relationship between the victim and the offender.

Examples of the symbolic interaction between offenders and victims of violence are found in Lundsgaarde's (1977) work analyzing narratives of the 268 homicides that took place in Houston in 1969. Lundsgaarde's aim in this study is to identify patterns in the outcomes of these cases in the criminal justice system, however while doing so he illustrates the process by which seemingly trivial encounters can result in fatal violence. Many of the narratives clearly typify this process. Take, for example, a case in which a relatively mundane situation devolves into violence when the participants' perceptions of righteousness are at odds:

> The trouble began when the victim, a 50-year-old male, arrived together with his wife to visit his nephew and family. As they pulled up in front of the nephew's house they parked in such a way that the neighbor's driveway was blocked. The neighbor came to the house shortly thereafter and requested that they move the car. The car was moved to permit the neighbor to drive his truck out of the driveway. The victim's car, however was again parked in front of the neighbor's driveway. This led to an argument between the two men. The killer went into his house, loaded his shotgun, and returned to the driveway where he openly stated that he would kill the 50-year-old man unless he moved his car away once and for all. The man unwisely chose to heed the advice of Nemesis and thus held his ground. He refused to acknowledge and respond to the verbal threat. One shot was fired and the victim fell over dead. The victim was not armed nor, according to several eyewitnesses, did he verbally or physically threaten the killer except, as noted, by holding his ground (110).

It is unlikely that the offender in this case killed the victim simply because he was angry about the parking arrangement. The narrative reveals a clear challenge the offender posed to the victim, possibly because he felt the victim had been disrespectful by not complying with the initial request. Even if the offender loaded the shotgun only to persuade the victim to move his car, once the challenge was made he could not back

down without risking a reputation as someone who makes idle threats. Nor could the victim comply without risking a reputation as someone who is easily intimidated by threats. Luckenbill (1977: 176) characterizes interactions such as this as "situated transactions" in which participants play certain roles that are "instrumental to the fatal outcome." In light of his analysis of Houston homicides, Lundsgaarde (1977) argues that the rich social context in which the incident occurred is crucial to understanding homicide.

Birkbeck and LaFree (1993) suggestthat criminologists seem to have abandoned their roots in symbolic interaction theory. However, Anderson's (1999) explanation for inner-city violence emphasizes the nature of the interaction between the victim and the offender. Anderson observes a common theme among violent incidents in which individuals' need to maintain respect deeply influences the meaning of interpersonal interaction, much like Lundsgaarde's example cited above. By paying attention to the situational details of an incident as well as the antecedent variables that may increase an individual's propensity to offend, Anderson is able to offer a more comprehensive explanation of the mechanism that yields patterns of violence concentrated among economically disadvantaged blacks.

The Intersection of Structure and Culture

The need to integrate structural and cultural explanations of crime frequently stems from the observation that neither approach has garnered sufficient support independent of the other (Kubrin and Weitzer, 2003; Sampson and Wilson, 1995). Furthermore, considering one approach at the cost of the other renders a theory

conceptually incomplete (Matsueda et al., 1992). Differential association (Sutherland, 1939), subcultural (Wolfgang and Ferracuti, 1967), and social learning (Akers, 1973) theories account for how violent behavior is learned, legitimized, and perpetuated, but fail to address the root causes of such behavior or its variation across subcultures. At the same time, structural theories such as strain theory (Merton, 1938) present a plausible explanation of socioeconomic settings conducive to crime but fail to adequately explain the mechanism by which these situations produce observed crime patterns. Matsueda et al. (1992) argue that "subcultures... are intimately tied to structural opportunities" and "any structural explanation of crime that ignores subcultures is incomplete" (768).

Integrating structural and cultural explanations is not new to criminology. For example, social disorganization theorists (Shaw and McKay, 1942/72) suggest that low economic status, ethnic heterogeneity and residential mobility give way to weakened social bonds and ineffective or nonexistent social control, yielding high crime rates. Sampson and Wilson (1995) draw on social disorganization research to develop a theory that further integrates structural and cultural explanations of offending to explain the relationship between race and violent crime. They suggest that concentrated disadvantage and residential inequality lead to "cognitive landscapes" in which crime comes to be expected and tolerated as a part of life (1995:50). By identifying a mechanism by which structural variables influence cultural variables, Sampson and Wilson (1995) clarify possible causes of criminal of violence.

Another example of combining structural and cultural elements in theory is found in Cohen's (1955) work integrating strain and subculture theories. Cohen (1955), a student of both Merton, a structural theorist and Sutherland, a cultural theorist (Cullen

and Agnew, 2003), addresses the question of how delinquent subcultures develop. Cohen theorizes that subcultures form as a result of the conflict that arises when working-class children are judged by middle-class standards of achievement. In doing so, he elaborates upon Merton's (1938) concept of innovation. According to Cohen (1955), working class families simply do not socialize their children to value that which middle-class families value, such as ambition, individual responsibility, skill, "worldly asceticism" (89), rationality, manners, physical self-control, constructive recreation, and respect for property. Because of this variation in socialization based on socio-economic status, opportunities for achievement are inherently dictated by social status. Working-class children encounter middle-class institutions such as school and they are unable to succeed in the eyes of their middle-class teachers and peers. When they fail to achieve middle-class ideals of success, as they inevitably do, they gravitate towards others who are accepting of them because they have shared the same experience. As a group, they reject the values of those who have rejected them and adopt a subcultural value system in which aggression is legitimized. Within the subculture they are able to achieve the status they were denied by mainstream culture. Cohen's (1955) link between strain theory and subculture theory illustrates the consideration of both when explaining deviance from conventional norms.

In short, to explain long-standing patterns of violence with respect to the interaction between race and neighborhood disadvantage, a theory should consider cultural as well as structural variables. Anderson (1999) does so by carefully illustrating the mechanism by which structural characteristics such as neighborhood disadvantage

and institutionalized racism give rise to a culture that uses violence as a tool to regulate violence.

Chapter Three: Literature

Anderson's (1999) detailed ethnography offers the code of the street as an explanation of violence in adverse socio-economic contexts. He focuses on residents who struggle on a daily basis with unemployment or underemployment, poverty, racial discrimination, and alienation from mainstream institutions and basic human services. In doing so, he echoes aspects of a number of existing criminological perspectives, including strain theory (Merton, 1938; Agnew, 1992; Messner and Rosenfeld, 2001), conflict theory (Turk, 1969), subcultural theory (Wolfgang and Ferracuti, 1967), social disorganization theory (Shaw and McKay, 1942/72; Sampson and Wilson, 1995), differential association theory (Sutherland, 1939), defiance theory (Sherman, 1993), and Black's (1983) theory of crime as social control. Before focusing on *Code of the Street* (Anderson, 1999), I will review the relevant literature that supports Anderson's ethnography. This includes literature on race, crime and the criminal justice system, as well as that on retaliation as a motive for violence. This chapter concludes with a review of the empirical research related to the intersection of race, neighborhood disadvantage, and retaliatory homicide.

Race, Crime, and the Criminal Justice System

Apart from the legacy of slavery, the sources of racism today are numerous and heavily researched. For example, Massey and Denton (1992) suggest that public policy decisions concentrate poor minorities in public housing, perpetuating a cycle of poverty, crime, and social unrest. Furthermore, Wilson (1987: 58), Sampson and Wilson (1995:42), and Sampson and Lauritsen (1997: 337) argue that the effects of race and

poverty in the inner city are confounded by "concentration effects" that result from the overwhelming convergence of constraints and deprivation with respect to not only poverty, but also employment, education, social networks, and conventional role models.

> "The communities of the underclass are plagued by massive joblessness, flagrant and open lawlessness, and low-achieving schools, and therefore tend to be avoided by outsiders. Consequently, the residents of these areas, whether women and children of welfare families or aggressive street criminals, have become increasingly socially isolated from mainstream patterns of behavior" (Wilson, 1987: 58)

Wilson (1987) suggests that concentration effects are in part due to the migration of middle- and working-class families from the inner-city ghetto. Specifically, they take with them support for social institutions such as churches, schools, recreational facilities and stores that insulate the extremely disadvantaged from the impact of prolonged joblessness and social isolation.

The existence of concentration effects makes direct comparisons between blacks and whites with respect to patterns of offending unclear. Socioeconomic status notwithstanding, "blacks and whites face vastly different environments in which to live, work, and raise their children" (Sampson and Lauritsen, 1997: 338). Short (1997) reviews the literature on the intersection of poverty, ethnicity, and violence and finds evidence that the relationship between race and violence is mediated by other factors such as employment, housing, family, and community characteristics.

Just as the relationship between race and crime is confounded by other factors, the relationship between race and criminal justice processing is also mediated by other variables that are closely intertwined with race (Sampson and Lauritsen, 1997). The empirical evidence on this topic is mixed particularly because the context of interactions between citizens and the police are especially complex. Thus, it is unwise to conclude

racial discrimination from racial disparities. For example, Black (1980) finds that, controlling for other variables, African Americans and suspects in disadvantaged neighborhoods are more likely to be disrespectful to police. This, along with other situational variables may account for the increased likelihood of force against minorities and the poor. Terrill and Reisig (2003) study 3,330 police-suspect encounters and find that police are likely to use more force in neighborhoods with greater disadvantage and higher homicide rates. This relationship is statistically significant independent of the effects of numerous situational variables including suspect intoxication, suspect disrespect, and suspect resistance, while the significant effect of suspect race on the likelihood of force disappears when these situational variables are considered. After reviewing the literature on race and criminal justice processing, Sampson and Lauritsen (1997) find little evidence of direct discrimination against racial minorities. Instead they find that neighborhood context interacts with situational variables to "predict arrest and coercive authority" (1997: 344).

Perception of injustice is central to Anderson's (1999) theory, since it is just as likely as actual injustice to lead to mistrust of criminal justice authorities. An extensive body of research addresses police conduct and public perception of police with respect to race and neighborhood disadvantage. A 2003 Gallup public opinion poll (Bureau of Justice Statistics, 2004: 116) reveals that the majority (73%) of blacks surveyed have "a great deal/ quite a lot" or "some" degree of confidence in the police. However, blacks are more than three times as likely as whites to report very little or no confidence in the police, and those with the lowest income are more than three times as likely as those with the highest income to report very little or no confidence in the police (2004: 116).

Research evaluating satisfaction with police finds that minorities and those living in disadvantaged neighborhoods are generally less satisfied with the police (Garcia and Cao, 2005; Huebner et al., 2004; Reisig and Parks 2000). Race is also found to be a strong predictor of perceptions of police misconduct (Weitzer and Tuch, 2004). In a test of conflict theory, Hagan and Albonetti (1982) report that Black Americans are considerably more likely than white Americans to perceive injustice in the criminal justice system as a whole, as are members of the lowest economic class. The effect of race on perceptions of injustice is strongest among members of the professional-managerial and working classes, but is not statistically significant among the unemployed or "surplus" population (Hagan and Albonetti, 1982: 336).

Although differential treatment of suspects and perceptions of unjust enforcement of the law contribute to the mistrust of the criminal justice system within disadvantaged minority communities, equally relevant to this research is the perception of unequal protection from crime by the criminal justice system. Kennedy (1997:29) argues that a history of "racially selective underprotection," though not often prioritized by researchers, is worse for society than disparities in enforcement. He traces the absent or ineffective protection of blacks from assault, murder, and rape throughout American history from the age of slavery to the age of segregation to the present day. Furthermore, Kennedy (1997) cites the underreporting of black victimization in the media. Although he cautions the reader to avoid making inferences regarding discrimination in protection from apparent disparities in reporting of crime by the media, the latter may be just as important as the former in influencing perceptions of injustice or a sense of alienation among citizens. It is this aspect of racial bias that functionally informs the code of the

street. That is, Anderson's (1999) theory of violence as a self-defense mechanism hinges on the sense among inner-city black Americans that they cannot rely on the criminal justice system for protection.

The contention that the criminal justice system does not protect the black community as well as it protects the white community is supported by recent research conducted by Paternoster et al. (2004) on the application of the death penalty in Maryland. The goal of the research was to assess the effect of race and geography on the prosecution of death penalty-eligible cases at particular points in the decision-making process, accounting for other relevant factors. The study finds that offender race does not appear to matter in death sentencing decisions when controlling for other variables. However, the prosecutor is more likely to seek the death penalty for cases in which the victim is white than for cases in which the victim is black, especially if the offender is also black. Black offenders who kill white victims are significantly and substantially more likely to be charged with a capital offense, controlling for relevant variables. These findings offer some support to the argument that the criminal justice system is racially biased in its treatment of defendants. They may also suggest a trend in the criminal justice system that signals that the lives of whites have greater value than the lives of blacks.

Perceptions of injustice among racial minorities may also have a direct impact on subsequent behavior. Sherman's (1993) defiance theory suggests that individuals who are poorly bonded to society and the criminal justice system will respond to illegitimate treatment by that system with an increased likelihood or seriousness of offending in defiance to the unfair sanction. In the case of general defiance an individual may respond

not to unfair treatment that they experience personally, but instead to the unfair treatment of a peer. Furthermore, Sherman (1993) suggests that indirect defiance occurs when the response is not directed toward the individual imposing the unfair sanction, but rather to society as a whole. Both of these dimensions of defiance theory inform a culture that values defiance as a way of life. Sherman (1993) points out that even mainstream culture often views the defiant individual as a hero. The contentious relationship between the black community and the criminal justice system reinforces the sense of isolation from mainstream institutions and cultivates a sense of mistrust and injustice on the part of members of the black community (Anderson, 1999).

Retaliation as a Motive for Violence

It is challenging to pinpoint an operational definition for revenge. In some respects revenge is strictly acting in retaliation to punish someone for a distinct harm that they have inflicted. This type of revenge is exemplified by traditional gang warfare, feuding, vigilante justice, honor killings, or retaliatory terrorist acts and usually assumes at least a small time delay between the original offense and the retaliation. A broader definition (Black, 1983: 34 "self-help") of revenge relaxes the temporal assumptions commonly associated with these examples and includes an immediate response to an insult:

> ...this conduct is intended as a punishment or other expression of disapproval, whether applied reflectively or impulsively, with coolness or in the heat of passion. Some is an effort to achieve compensation, or restitution, for a harm that has been done. The response may occur long after the offense, perhaps weeks, months, or even years later; after a series of offenses, each viewed singly as only a minor aggravation but together viewed as intolerable; or as an immediate response to the offense, perhaps during a fight or other conflict, or after an assault, theft, insult, or injury (36).

This extension of the definition may include in its scope a case as peripheral as an assault during the course of an argument in which the offender has been insulted and feels the need to get back at his or her victim in the heat of the moment. Broader still is Anderson's (1999) conceptualization, which builds an entire structure of behavior and interaction among inner-city blacks around the belief that they must maintain respect among their peers. By this definition an act of revenge can be in response to the mere perception of an affront to one's honor.

Despite little consideration in the criminological literature, prior research (Katz, 1988; Luckenbill, 1977; Lundsgaarde, 1977; Wolfgang, 1958) suggests that revenge often plays a role in homicide. Wolfgang's (1958) research on the patterns of criminal homicide includes data on the motive for the offense as recorded by police officials. Motives include "1) altercation of relatively trivial origin; insult, curse, jostling, etc., 2) domestic quarrel, 3) jealousy, 4) altercation over money, 5) robbery, 6) revenge, 7) accidental, 8) self-defense, 9) halting of felon, 10) escaping arrest, 11) concealing birth, 12) other and 13) unknown" (1958: 191, numeration mine). Although revenge clearly has its own category, Wolfgang acknowledges that these categories are not necessarily mutually exclusive and some of them may overlap. Categories one, two, three, and six are similar according to Black's (1983) definition of self-help that suggests any of these can be vengeful. Thus, the percentage of all criminal homicides in Philadelphia (1948-1952) that can potentially involve revenge ranges from a minimum of 4.8 percent to a maximum of 65.9 percent (Wolfgang, 1958).

Revenge as a motive for crime is in part theoretically grounded in Black's (1983) work on crime as "self-help" (34). Black suggests that what we label criminal behavior

often amounts to individuals who think they have been wronged helping themselves to justice. This often results in a perceptual role reversal between victims and offenders. Offenders who feel that they have been wronged believe that they are justified in committing their crime and that their victim is actually an offender. Dobrin (2001) assesses the effect of offending on the risk of homicide victimization and concludes that previous offending increases the risk of subsequent homicide victimization. Furthermore, Black (1983) describes traditional societies in which it is not only the offender's right to retaliate, but also his duty to do so in order to maintain any semblance of respect.

Nisbett and Cohen (1996) explain differences in violence rates between the northern and southern United States within the context of the need to maintain "a reputation for strength and toughness" (41). They base their theory on the fact that the South was settled not by farmers, like in the North, but by herdsmen. The transient, unstable nature of the herdsmen's lives lends itself to a greater vulnerability and need to maintain respect in order to protect their property. Nisbett and Cohen (1996) argue that this "culture of honor" has transcended generations and relies heavily on one's ability to unilaterally punish those who offend in any way. The "culture of honor" goes a step beyond revenge and retaliation to justify the instigation of violence in order to demonstrate toughness.

Nisbett and Cohen (1996) develop this theory primarily as an explanation of the variation in rates of violence between the North and the South. However, Butterfield (1996) skillfully illustrates the cultural transmission of a code of honor in his case study of the Bosket family. He begins with Aaron Bosket who was born into slavery in "bloody Edgefield" (3), South Carolina and traces the family's record of violence all the

way to present-day New York City where Willie Bosket, Aaron's great-great-grandson killed two people on a subway at age fifteen. Through interviews with Willie and his family, Butterfield learns that Willie's killing made him act "puffed up, like he was real bad, real tough, like he had done something to show he was no pushover and he deserved a lot of respect" (211).

Gang violence is often retaliatory in nature (Decker, 1996). In fact, Decker (1996) identifies retaliatory violence as a mechanism by which an otherwise loosely organized group with minimal leadership forms, achieves solidarity, and expands. He conducted a study of gangs in St. Louis between 1990 and 1993, contacting gang members in the community and developing a representative snowball sample of 99 active gang members. Semi-structured interviews allowed researchers to systematically collect data about joining gangs, the organization of gangs, legal and illegal activities, links to other gangs and ties to traditional institutions. The interviews suggest that gangs are very loosely organized and have vague goals. Most of the time gang members are in small groups, as the whole gang rarely assembles. However, they also revealed a pattern whereby the gang collectively responds to an actual or perceived threat from another gang with retaliatory violence. Violence is sometimes even preemptive. It may be in response to a real threat or a "mythic" (261) threat that gang members perpetuate to reinforce members' identification with the gang. Regardless, retaliatory violence serves a "symbolic function" (257) to unify and strengthen the solidarity of the gang.

Katz (1988) uses terminology that reflects consideration of the phenomenon of seduction that attracts a criminal. For example, while authorities and experts use terms such as "homicide," "delinquency," and "robbery" to identify criminal behavior, Katz

uses the terms "righteous slaughter," "sneaky thrills," and "doing stickup" to make the point that offenders often do not conceive of themselves as doing wrong. In fact, Katz (1988: 9) argues that those who practice "righteous slaughter" see themselves as the embodiment of "some eternal, universal form of the Good."

Code of the Street

Anderson's (1999) theory is frequently categorized in criminology textbooks as a subcultural or social learning theory (for example, Cullen and Agnew, 2003; Vold et al., 2002). However, the code of the street takes root in the structural disadvantages that cause strain on inner-city residents in their daily lives. There is a scarcity of many of the opportunities that tie individuals to the success-oriented goals of mainstream society such as quality education and employment. Similar to strain theorists (Merton, 1938; Agnew, 1992; Messner and Rosenfeld, 2001), Anderson (1999) claims that the lack of resources leads to a great deal of hopelessness, frustration, and alienation among the lower class:

> The inclination to violence springs from the circumstances of life among the ghetto poor—the lack of jobs that pay a living wage, limited basic public services (police response in emergencies, building maintenance, trash pickup, lighting, and other services that middle-class neighborhoods take for granted), the stigma of race, the fallout from rampant drug use and drug trafficking, and the resulting alienation and absence of hope for the future (32).

Although economic frustration contributes to disadvantaged blacks' alienation from broader society, the most direct cause of the code of the street appears to be the lack of faith in conventional institutions of justice that results from long-standing traditions of racial discrimination. Anderson (1999) argues that, due to the perception that the criminal justice system has a double standard for blacks and whites, poor blacks have an intense distrust for the system. A cycle has developed whereby black residents of disadvantaged neighborhoods do not trust the authorities. Due to the erosion of order in

these neighborhoods, Anderson explains, "public authorities have seemingly abdicated their responsibilities" (1999: 66). This isolation leaves residents to assume personal responsibility for their own safety. In the place of formal social control, an informal system allows individuals to acquire respect or "juice" (72) on the street by demonstrating a willingness to fight and to defend oneself. Although the code of the street resembles Wolfgang and Ferracuti's (1967) subculture of violence theory, Anderson (1999) is careful to point out that while some residents of inner-city neighborhoods firmly believe in the values of the subculture, many others do not. However, these "decent" (1999:35) residents must still live by the code on a daily basis in order to protect themselves and "regulate the use of violence" (34).

Anderson (1999) repeatedly indicates that this socialization to street life begins very early and is often encouraged by parents as a self-defense mechanism. Not only does a willingness and ability to defend oneself save face in a particular situation, it is effective for building a reputation for toughness and preventing future threats from arising. Over time, after numerous interpersonal encounters one develops not only a reputation, but a network of friends and family members, each with his own reputation, that can be called upon for support if needed.

Anderson compares mainstream culture to the culture of impoverished inner city black communities with respect to the meaning attributed to an insult or attack. In the former one does not necessarily feel a need to respond violently to an attack, despite the shame and anger they may feel as a result of victimization. However in the latter, how one responds to threats or victimization constructs his or her identity, self-respect, and

honor on the streets. Building "a credible reputation for payback, or vengeance... is strongly believed to deter future assaults" (Anderson, 1999: 76).

Empirical Research

Anderson (1999) is certainly not the first to find qualitative support for the idea that violence is in many ways a self-defense mechanism. Lundsgaarde (1977) uses qualitative data on homicide patterns in Houston to illustrate the importance of motive in understanding the nature of violence. In an analysis of all Houston homicides in 1969 he presents numerous accounts of cases in which the homicide is the direct result of nagging, a quarrel, an insult, a dare, or a threat. While he makes it clear that motive or intent is crucial in establishing criminal culpability (more than half of the killers were not officially punished) he also draws attention to the fact that in case after case a great deal of useful information regarding causality can be derived from accounts of crimes that contain data on the motive. Upon reviewing the case files of the 268 homicides that took place in Houston in 1969, Lundsgaarde (1977) states, " it is not difficult to understand how interpersonal aggression and violence can become adaptive strategies for survival when so many other avenues to social participation in the world's most affluent society remain closed" (52).

Although Lundsgaarde's (1977) study, along with Wolfgang's (1958) work discussed above, demonstrates that motive is important to the classification and understanding of homicide, they do not quantitatively assess the variation in motive by race and degree of neighborhood disadvantage. As previously mentioned, most studies on violence and neighborhood context do not examine incident-level details of homicides

such as motive, and most studies on retaliatory homicides are qualitative. Several studies evaluate Anderson's (1999) *Code of the Street* either explicitly or implicitly using various methods (Baumer et al., 2003; Brezina et al. 2004; Kubrin and Wadsworth, 2003; Kubrin and Weitzer, 2003; Stewart et al., 2002). Several of these studies (Kubrin and Wadsworth, 2003; Kubrin and Weitzer, 2003; Stewart et al., 2002) fail to evaluate differences in the impact of neighborhood disadvantage on the code of the street with respect to offender race. Most of them use the circumstances of an offense to measure adherence to the code of the street. Only one (Kubrin and Weitzer, 2003) uses motive as a measure to approximate the code of the street.

Most recently, Brezina et al. (2004) review studies of youth violence and find support for several premises of Anderson's (1999) *Code of the Street*. Not surprisingly, there is evidence that "individuals who believe that violent retaliation is an acceptable, justified, and/or necessary response to provocation tend to exhibit relatively high levels of violent behavior" (Brezina et al., 2004: 321). The effect of these beliefs appears to diminish the effects of variables such as socioeconomic status and underclass status on violent behavior. Although Brezina et al. (2004) report that the literature suggests transmission of the code of the street occurs through social learning mechanisms, there is also support for the hypothesis that it is an adaptation to greater threats of victimization (Markowitz and Felson, 1998).

In general, Brezina et al. (2004) conclude that there is support for the code of the street in the empirical literature. However, they note that the role of race remains unclear. Although much of the existing research focuses on socio-economic correlates of the code of the street and finds more support for the effects of disadvantage than for the

effects of race, Brezina et al. (2004) suggest that an interactive effect between race and concentrated poverty should be evaluated to better understand the role race plays in the code of the street.

Stewart et al. (2002) use a sample of 867 African-American children living in non-metropolitan areas to evaluate social-psychological and community-level effects on childhood violent behavior. Among the social-psychological variables they consider is a measure of "adopting a street code" (2002:813). This measure (2002:813) was comprised of six self-report items assessing the extent to which the respondent felt it was justifiable to use violence to "defend your rights", to prevent people from "taking advantage of you", to gain respect, to get people to "treat you fairly," or to show others that "you cannot be intimidated."

Stewart et al. (2002) also include measures such as neighborhood violence, family socio-economic status, and associations with violent peers. Among their findings are statistically significant relationships indicating that those who are more likely to adopt a street code are also more likely to have violent peers and live in neighborhoods with high levels of violence. Those who are likely to adopt a street code are also likely to have lower levels of family socio-economic status. Furthermore, Stewart et al. (2002) find that those who adopt a street code are significantly more likely to exhibit childhood violent behavior, controlling for the effects of family socio-economic status, family structure, gender, number of children in the family, violent peers, whether the parents used corporal punishment, parental violent behavior, quality of parenting, neighborhood affluence, and neighborhood violence. Although these results certainly offer some support of

Anderson's (1999) theory, by analyzing a sample of African-American children Stewart et al. (2002) fail to assess the importance of race.

Kubrin and Wadsworth (2003) use a slightly different approach by evaluating structural covariates of African-American homicides disaggregated by motive. Although this study also ignores the effects of race that are important to Anderson's (1999) theory, it does provide a partial test of the theory. Kubrin and Wadsworth (2003:11) analyze data on 1,148 homicides committed by black offenders between 1985 and 1995 that fall into the following categories based on motive: "gang, intimate, stranger robbery, nonstranger robbery, stranger altercation, and nonstranger altercation." They hypothesize, based in part on the code of the street theory, that "disadvantage encourages higher rates of violent behavior as an adaptive strategy, to earn respect and esteem, or as an expression of frustration" (2003:17). Thus, they predict that higher levels of neighborhood disadvantage, measured by economic indicators in the 1990 census data, will lead to more stranger and nonstranger altercation homicides. Furthermore, they predict that this relationship will be stronger for nonstranger homicides than stranger homicides, given the importance of maintaining a reputation for toughness.

Kubrin and Wadsworth (2003) find that high levels of neighborhood disadvantage do predict more stranger and nonstranger altercation homicides, however the effect of neighborhood disadvantage is stronger for stranger altercations than nonstranger altercations, contrary to the authors' prediction. Furthermore, I conducted hypothesis tests on the difference between each of the regression coefficients for altercation homicide and the regression coefficient for total homicides following the convention

established by Paternoster et al. (1998).[1] I found no significant difference between the effects of neighborhood disadvantage on stranger altercation homicides and total homicides and nonstranger altercation homicides and total homicides. While Kubrin and Wadsworth (2003) conclude that these findings support Anderson's (1999) theory, I argue that the support is moderate since neighborhood disadvantage does not appear to predict homicides resulting from altercations any differently than it predicts homicide overall.

That said, it is possible that the assumption that homicides resulting from altercations are representative of a cultural adaptation to maintain respect is too abstract. It is unlikely that all homicides stemming from an altercation are the result of the offender's intention to defend his honor. In addition, homicides that are not the result of altercations, but may be representative of the code of the street are not considered in the hypothesis that Kubrin and Wadsworth (2003) put forth. For example, the fact that gang-related homicides, which they also find to be strongly related to high levels of neighborhood disadvantage, are not included in their hypothesis could undermine this study as a test of Anderson's (1999) theory.

Baumer et al. (2003) use area-identified National Crime Victimization Survey (NCVS) data to evaluate the code of the street with respect to assaults and robberies. In a thoughtful operationalization of Anderson's (1999) theory, Baumer et al. (2003:40) predict that "victims of assaults in disadvantaged neighborhoods are more likely to resist their attackers and to be injured, whereas victims of robberies from these areas are less likely to resist and suffer injury..." and "...victims of robberies and assaults from

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[1] using the equation: $Z = \frac{\beta_1 - \beta_2}{\sqrt{SE_{\beta_1}^2 + SE_{\beta_2}^2}}$

disadvantaged neighborhoods are more likely to be attacked by an offender who is armed with a gun." The authors (Baumer et al., 2003) make this claim because Anderson (1999) argues that the code of the street entails different responses to robbery and assaults. When assaulted, a victim must fight back in order to maintain respect that can help protect him from future assaults. However, the code of the street dictates that a victim of robbery should follow rules of etiquette that require him to defer to the power of the offender and comply with his demands. Also, a high prevalence of gun possession characterizes neighborhoods with a pervasive code of the street (Anderson, 1999).

The findings of this study (Baumer et al., 2003) offer some support for Anderson's (1999) description of violence in areas of socioeconomic disadvantage. Bivariate analyses suggest that offenders in disadvantaged neighborhoods are more likely to use a gun and victims of assault in these neighborhoods are likely to resist, but victims of robbery are not. Thus, victims of assault in disadvantaged neighborhoods are more likely to suffer injury. When controlling for demographic and situational variables, the findings regarding resisting assault and complying with robbery persist, but the finding regarding the likelihood of injury does not. Baumer et al. (2003) also test whether neighborhood disadvantage has differential effects with respect to urban location, offender race, offender age, or offender age as Anderson (1999) suggests. Their only significant finding of these tests is that younger offenders in disadvantaged neighborhoods are more likely to use a gun during an assault. Although black offenders are more likely to use a gun in a robbery; blacks, males, and offenders in urban areas are not more likely to use a gun in disadvantaged areas.

Baumer et al. (2003) conclude that violence prescribed by the code of the street takes place in disadvantaged areas regardless of offender characteristics. However, they acknowledge several methodological problems. For example, they suggest that due either to inaccessibility or poor response rates in household surveys, the NCVS data may undersample those most likely to follow the code of the street. Most notably, however, they also point out that they do not use a direct measure of "attitudes and expectations of offenders and victims" (65). Instead they use certain behavior (carrying a gun and resisting assault, but not robbery) as a creative, yet rough proxy for beliefs that are characteristic of the code of the street. The present research offers an improved measure of the code of the street. Although retaliatory homicide is also a form of behavior, it captures the motive of the offender and is a more appropriate measure of his attitudes and expectations.

Kubrin and Weitzer (2003) use data collected from the St. Louis Police Department records to analyze correlates of retaliatory homicides in an attempt to take up the challenge issued by Bruce et al. (1998:41) to "identify mechanisms linking strucutral disadvantage to the perpetration of violence within the African American community." They define retaliatory homicides as those involving at least two specific time points that the St. Louis police established as " (1) an initial disputatious interaction, in which an affront to one party remained unanswered or unresolved and (2) a subsequent encounter during which the offended party exacted deadly retribution for the earlier offense" (164). Kubrin and Weitzer (2003) identify the following significant correlates of this measure: non-retaliatory homicides, percent of the neighborhood population that is black, median family income, percent of the neighborhood in poverty, percent of the neighborhood that

is young males, percent of children in the neighborhood not living with both parents, percent of the neighborhood that is unemployed, and percent of the neighborhood that is divorced (2003: 167). Although measuring retaliatory homicide is a reasonable way to detect a street code, there are several limitations to this study.

First, Kubrin and Weitzer emphasize the relatively unremarkable finding that retaliatory homicide is concentrated in areas of greater disadvantage. Their regression analysis does indicate that the relationship between retaliatory homicide rates and neighborhood disadvantage (a composite measure of poverty, children not living with both parents, median family income, unemployment, and percent black) is somewhat stronger than the relationship between non-retaliatory homicide rates and neighborhood disadvantage (p=.063). However, the conclusion that Kubrin and Weitzer (2003) draw from this is that "disadvantaged neighborhoods are more likely to experience retaliatory than non-retaliatory homicide" (169). In addition to being substantively uninformative, this statement is not true. By their report, in the areas of St. Louis characterized by extreme poverty, 19% of all homicides were retaliatory (162).

A second limitation of this study is its treatment of race. Kubrin and Weitzer aim to determine if a code of the streets explains high rates of violence in African American communities. However, their only measure of race is census data measuring percent of a census tract that is black and they include this variable in the model as one component of a factor measuring neighborhood disadvantage. Kubrin and Weitzer (2003:165) do address this issue:

> Race is distinct from disadvantage; treating them as attributes of the same dimension confounds attempts to identify their distinct influences on homicide levels. Nevertheless, the finding that percent black loads heavily with the poverty-related variables makes sense ecologically (in St. Louis), since this reflects neighborhood segregation mechanisms that concentrate poor, African-

> Americans, and single-parent families with children (Wilson, 1987). In such a segregated context, it is problematic to try to separate empirically the influence of percent black from the other components of the disadvantage scale, for there are in fact no predominantly white (>75 percent white) neighborhoods that map onto the distribution of extreme disadvantage that black neighborhoods experience.

These are all important points; however their treatment of race and neighborhood disadvantage as parts of the same measure undermines their ability to assess the individual components of the code of the street.

Kubrin and Weitzer (2003) do conduct a closer analysis of the retaliatory homicides, distinguishing between cultural retaliatory homicide (pertaining to the code of the street) and situational retaliatory homicides. They find that neighborhood disadvantage predicts cultural retaliatory homicides, but not situational retaliatory homicides. Their concerted effort to identify not just retaliatory homicides, but homicides that are explicitly indicative of the code of the street, is an invaluable contribution to the study of the code of the street. Future research should attempt to do this as well. However, their discussion of the characteristics of these homicides is mostly qualitative and the study does not quantitatively test their relationship to the elements of the code of the street.

Although this single study does examine the specific effects of neighborhood disadvantage on retaliatory homicides, neither Kubrin and Weitzer (2003) nor any other study to date has specifically tested a model including both offender race and neighborhood disadvantage as predictors of retaliatory homicides at the incident level.

Chapter Four: Data and Method

In this chapter I define my hypotheses and discuss the data and analytical methods I use to test them. The hypotheses are designed to assess whether the elements of the code of the street- race, neighborhood disadvantage, and retaliation- are consistent with patterns of homicide. I give an overall description of the data with respect to the variables in question. I also describe evaluate the methodological implications of the data. These include the validity and reliability of the dependent and independent variables, and the use of disaggregated homicide data.

Hypotheses

It is possible that homicides that occur in the context of the code of the street account in part for the disproportionately high rates of homicides among disadvantaged blacks. If this were the case one would expect homicides committed by socio-economically disadvantaged blacks to be more likely to be retaliatory in nature than homicides committed by whites who are less disadvantaged. The present study is designed to address the following hypotheses:

I) Homicides that occur in neighborhoods with greater disadvantage are more likely to be retaliatory than homicides that occur in neighborhoods with a lesser degree of disadvantage.

II) Homicides committed by black offenders more likely to be retaliatory than homicides committed by whites.

III) There is an interaction between race and neighborhood disadvantage whereby the effect of neighborhood disadvantage on retaliatory homicide is greater for black offenders than white offenders.

Although effects of race and neighborhood disadvantage are important in their own right, the interaction between race and neighborhood disadvantage is a particularly relevant test of Anderson's theory. Findings that support the code of the street theory are those that indicate a higher likelihood of a homicide being retaliatory if the offender is black and/or the homicide took place in a disadvantaged neighborhood.

Dependent Variable

The source of the data for the dependent variable, *retaliatory homicide,* is the Chicago Homicide Project data set collected by Block, Block and the Illinois Criminal Justice Information Authority (1998). The researchers compiled the data set from the Chicago Police Department's Murder Analysis Reports. It includes a wealth of information for all homicides that took place in Chicago between 1965 and 1995, such as data on the victim/offender relationship; the victim's and offender's prior records; the time and place of the homicide; the type of weapon used; the involvement of drugs, alcohol, gangs, child abuse, or domestic relationships; if or how the offender was identified; the death of the offender(s), if applicable; demographic variables for the victim and the offender; and several measures that assess the degree to which an act is retaliatory in nature.

For the purpose of this analysis I will consider police records on offenders who committed homicides between 1985 and 1995. I am limiting the data set to this time

period for two reasons. First, it corresponds with the 1990 Census, which I use as a source of data on neighborhood characteristics. Second, in recent years a higher proportion of homicides are coded as retaliatory compared to earlier years. I have no reason to assume that the frequency of retaliatory homicide has actually increased over the years. Block and Block (1992) point out a change in police recording practice in 1982 that included more detailed coding of causal factors. This coding change may have lead to the increase in homicides recorded as retaliatory.

The variables used to determine whether a particular homicide was retaliatory include the primary causal factor, secondary causal factor, and "Was the victim committing a crime?" Primary causal factor and secondary causal factor each include 52 incident-level situational factors[2] that led to the homicide, including "retaliation". (See Appendix A for a complete list.) Block (1993: 187) explains that the causal factor "retaliation" refers to offenses in which "the victim was killed in reaction to an earlier confrontation." The primary causal factor was coded based on the causal factor listed on the Murder Analysis Report. The secondary causal factor was coded based on any additional information the coder gathered from the report that indicates another motivation.

In addition, the variable that asks, "was the victim killed while committing or as a result of committing a predatory crime?" includes a category that indicates specifically that the offender's motive for the homicide was revenge for an earlier predatory crime. I recoded each observation based on these three variables into two groups, according to the rules listed below.

[2] Of the 52 possible codes for causal factors, 38 causal factors are observed in the data set.

I coded a case "retaliatory" if any of the following conditions are met:

i) The primary causal factor is coded as "retaliatory"

ii) The secondary causal factor is coded as "retaliatory"

iii) "Was victim committing a crime?" is coded as "Yes, vengeance"

I coded all remaining cases for which causal data are available as "not retaliatory." Note that the 52 codes for causal factors are not mutually exclusive. Furthermore, there is no particular order of operations for coding a particular homicide with multiple causal factors. In other words, no priority is systematically given to certain causal factors if the police or researchers observe more than one. As a result, it is possible that some causal factors, including retaliation, are underrepresented in the data.

Independent Variables

The source of the data for the independent variable *neighborhood disadvantage* is the 1990 United States Census. The census tract for each incident is included in the Chicago Homicides data set, allowing me to merge the homicide data with tract-level data from the 1990 census. The variables used to measure neighborhood disadvantage are drawn from Anderson's (1999) characterization of disadvantage as well as previous research on homicide and neighborhood disadvantage (Baumer et al., 2003; Kubrin and Weitzer, 2003; Morenoff and Sampson, 1997; Parker, 2001). They include percent below poverty, percent unemployed (age 16 and older), median family income, perent of households receiving public assistance, and percent of households that are headed by a female.

Each of the variables captures a dimension of the latent construct neighborhood disadvantage. Consequently, these five variables are highly collinear. I cannot include them in the same regression model without running the risk of overestimating standard errors. To verify that they are in fact measures of the same latent construct I conducted a principle components factor analysis on the group of five variables. The factor analysis yielded a single factor on which each of the variables loaded very highly (See Appendix B). To facilitate regression analyses using this composite measure of neighborhood disadvantage, I created a variable that is the factor score representing the averages of the five variables, weighted according to the factor loadings. The factor score variable that represents neighborhood disadvantage has a mean of zero, and ranges from -3.052 to 2.886.

The Chicago Homicides data set also includes details on the independent variable *offender race*. The categories for race in the data set are white, non-Latino; black, non-Latino; Latino; and Asian, other. Although Anderson (1999) concentrates on the experiences of inner-city blacks, it is not without merit to investigate the code of the street with respect to other minorities, particularly Latinos. The proportion of homicides committed by Latinos is nearly three times the proportion committed by non-Latino whites in the Chicago Homicides data set. Horowitz (1983) discusses the importance of honor in her ethnography of a Hispanic community. However, research on perceptions of the criminal justice system is frequently limited to exploring the differences between blacks and whites. It is unclear whether Latinos typically interact with the criminal justice system in a way similar to blacks or whites.

Control Variables

In addition to the key independent variables described above, I add several important control variables to the models. These are characteristics of the incident, victim, offender, or neighborhood in which the homicide took place that are likely to be associated with the outcome measure, the measure of neighborhood disadvantage, or both. I control for the time trend in retaliatory homicide mentioned above, as well as trends in homicide generally by including dichotomous variables representing each year between 1985 and 1995, excluding 1990 as a reference category. Variables that could be related to the probability that a homicide is retaliatory include the number of offenders, the number of victims, the offender's age, the first victim's[3] age, the offender's gender and the first victim's gender (measured as a dichotomy where 1=male 0=female) and the victim-offender relationship (a categorical variable including spouse, child/parent, other family, friends, acquaintance, rival gang, business, illegal business, stranger, and other). Finally, I control for the population of the census tract in which the homicide occurred.

Descriptive Statistics

Table 1 shows descriptive statistics of the dependent and independent variables. Approximately 14.5% of all the homicides in the sample were retaliatory. The census tracts in which the homicides took place are characterized by considerable neighborhood disadvantage. For example, on average over one third of the residents are living below the poverty level, 21.6 percent are unemployed, almost 30 percent of the households in the census tract receive public assistance and almost 34 percent of the households are

[3] In the offender-level data set, data are only available on the first victim if the case involved multiple victims. The missing victim data are unlikely to be problematic considering the mean number of victims is 1.05 (Table 1), indicating that multiple victims are relatively rare.

headed by a female. The tracts where homicides took place have an average median family income of $22,011. Most (76.58%) of the offenders in the sample are black (non-Latino), while only 6.31 percent are white (non-Latino). Latino offenders make up 16.53 percent of the sample, and the remaining .57 percent of offenders are categorized as Asian or "other." Almost 90% of offenders and 85% of victims are male. The average offender age is 25.22 and the average victim age is 29.39. It appears that multiple offenders are more common than multiple victims. In fact, the average number of offenders is 1.94 while the average number of victims is 1.05. The distribution of

TABLE 1. DESCRIPTIVE STATISTICS (N=8015)

Variable	Mean	Standard Deviation	Minimum	Maximum
Retaliatory Homicide	0.1452	0.3524	0	1
Neighborhood Disadvantage	$1.82x10^{-10}$	1.00	-3.0519	2.8858
% Below Poverty	35.93	20.56	1.1	93.8
% Unemployed	21.59	12.72	0	66.5
Median Family Income	22,010.99	11,818.94	4,999	118,289
% HH Rec. Public Assistance	29.85	18.76	0	86.62
% Female-Headed HH	33.90	17.34	0	85.64
White Offender*	.0631	.2432	0	1
Black Offender	.7658	.4235	0	1
Latino Offender	.1653	.3715	0	1
Asian/Other Offender	.0057	.0755	0	1
Male Offender	.8977	.3031	0	1
Male Victim	.8465	.3605	0	1
Offender Age	25.22	10.17	10	90
Victim Age	29.39	14.95	0	97
Number of Offender	1.94	1.42	1	11
Number of Victims	1.05	.2815	1	7
VOR: Spouse	.0936	.2913	0	1
VOR: Child/Parent	.0404	.1970	0	1
VOR: Other Family	.0256	.1579	0	1
VOR: Friends	.0344	.1824	0	1
VOR: Acquaintance	.2916	.4545	0	1
VOR: Rival Gang	.1768	.3815	0	1
VOR: Business	.0207	.1424	0	1
VOR: Illegal Business	.0771	.2668	0	1
VOR: Stranger*	.1857	.3888	0	1
VOR: Other	.0541	.2263	0	1
Total Tract Population	4449.34	2424.14	216	16279

* omitted reference category

victim-offender relationships is similar to those found in previous research discussed above. Only 18.57 percent of the homicide offenders were strangers to their victim. Most frequently (29.16 percent of offenders), the victim and offender were acquaintances.

Disaggregation of Homicide Data

A substantial body of research finds that, using disaggregated data, important distinctions can be made between the covariates of different types of homicide (Avakame, 1998; Flewelling and Williams, 1999; Kubrin, 2003; Kubrin and Wadsworth, 2003; Parker, 2001; Parker and Johns, 2002). Because homicides are characteristically heterogeneous, research conducted using aggregated homicide data often yields conflicting results (Flewelling and Williams, 1999; Parker et al., 1999). For example, if a particular variable is highly correlated with stranger homicide, but not with non-stranger homicide the strength of the relationship may not be detected when examining homicide data that are not disaggregated by victim-offender relationship. As a result, it could be misleading to apply conclusions drawn about homicide in the abstract to particular cases. In addition, understanding the causes of specific types of homicide could better inform policy initiatives.

A number of studies using homicide data that is disaggregated on various dimensions identify important differences in relationships between predictors and particular types of homicide. Homicides are frequently disaggregated on the basis of victim-offender relationship (Avakame, 1998; Flewelling and Williams, 1999; Kubrin, 2003; Parker, 2001; Parker and Johns, 2002) or type of motive (Flewelling and Williams,

1999; Kubrin, 2003). However, several researchers have found important distinctions between predictors of race-specific homicide as well (Kubrin and Wadsworth, 2003; Parker, 2001; Parker and Johns, 2002). For example, Parker and Johns (2002: 290-291) find that while urban disadvantage and segregation predict higher rates of urban violence among blacks, the same cannot be said of violence among whites. This finding underlines the importance of using disaggregated homicide data to examine how variables predict homicide differently across races.

Flewelling and Williams (1999) discuss three important methodological limitations of disaggregated homicide data. These include difficulties with measurement error, sample size, and treatment of multiple victims and offenders. The Chicago Homicide Project is designed in such a way that minimizes the adverse impact these limitations have on analyses.

First is the concern that analyses using disaggregated homicide data are more sensitive to error in data collection or measurement error (Flewelling and Williams, 1999). Specifically, homicide data are frequently limited to the information gathered by police at the time of the offense. Because investigations can be lengthy processes, the ultimate facts of a case may not become clear until months or years after the data have been collected. A solution to this problem is updating the data as new information becomes available, minimizing the problem of missing or inaccurate data. Flewelling and Williams (1999) actually cite the Chicago Homicide Project as one of the best examples of this practice. At each stage of the data collection, the researchers updated data collected in previous stages (Block and Block, 1992). Furthermore, they made every

effort to minimize variation in the definition of variables over the 25-year period and data coders were carefully trained and supervised to maximize the reliability of the data.

A second methodological limitation of disaggregated homicide data is the small sample size of groups when homicides are divided into typologies. This could complicate the interpretation and weaken the power of hypothesis tests. However, the degree to which this shortcoming can impact analyses inherently depends on the granularity of the typologies and the size of the overall sample. For example, disaggregating homicides by individual neighborhoods would likely yield very few observations within categories, exacerbating the effects of measurement error. In certain racially homogeneous areas, disaggregating homicides by race could have the same result. In fact, despite the fact that the Chicago Homicide Project codes for white, black, Latino, and Asian/other, I am unable to perform hypothesis tests on cases in which the offender is coded as Asian/other due to an insufficient sample size for that category of offenders. Although I begin with a large sample of homicides, the small proportion of white offenders could limit the power of my hypothesis tests regarding the differences between retaliatoryoffending patterns for blacks and whites.

Finally, disaggregated homicide data can be problematic because of the difficulties inherent in handling incidents with either multiple victims or multiple offenders. While each independent victim is counted as a homicide, occasionally there are multiple offenders responsible for killing a particular victim or multiple victims killed by one or more offenders. Conducting analyses using details of only the first victim or the first offender can yield misleading results. The Chicago Homicide Project accounts for this problem by creating separate victim- and offender-level data sets (Block and

Block, 1992). In the victim-level data set each observation is one victim and includes details on the first five offenders associated with that victim. In the offender-level data set each observation is an offender and includes information on that offender's first victim. For incidents in which there were multiple offenders, but only one victim, the victim data is repeated for each offender in the offender-level data set. Victim identification numbers link the two data sets, allowing for incident-based analyses.

I am currently concentrating on the offender-level data because the code of the street is a theory of offender motivation. However, the availability of the victim-level data set is helpful because it allows me to investigate the possibility of biases in cases where an offender is identified, compared to cases in which no offender is identified.

Validity

As is the case with any data set, the measurement of these variables is not without error. Here I discuss several sources of error that may compromise the validity of the variables and result in biased predictions. For example, a number of the homicides took place in census tracts with extremely small sample sizes. Because the neighborhood variables for these cases are likely to be highly unstable, it is ill-advised to make inferences using these observations. Following the convention in the literature (Kubrin and Weitzer, 2003; Morenoff and Sampson, 1997), I eliminate observations in which the population of the census tract is less than 200, compared to a unique tract average of 3348.59. This subset represents approximately 0.75% of the observations. Other threats to the validity in this research include missing data bias and the ambiguous definition of retaliatory homicide.

Missing Data Bias

Perhaps the most significant source of potential bias in the Chicago Homicide data set is missing data. Of the 8,825 victims killed between 1985 and 1995, offenders were identified for 76.6 percent (n=6,760). This is considerably higher than the national average clearance rate for homicide in 1995, which was 65% (FBI, 1995). Although I concentrate on the offender-level data, which includes a total of 9,310 offenders, it is important to assess whether or not bias is introduced by the exclusion of incidents for which no offender was identified by the police. I am unable to determine objectively if there is bias in offender measures such as offender race and motive, however, I can find out if missing offender data are related to neighborhood characteristics of the census tracts in the sample. To do this I calculated mean values of the neighborhood disadvantage variables for cases in which no offender was identified and compared them to the corresponding tract means for cases in which at least one offender was identified (Table 2). The last column of the table contains p values for a two-tailed test of the hypothesis that the means are the same for both groups.

The results in Table 2 indicate that there is no significant difference between cases for which no offenders were identified and cases for which at least one offender was identified with respect to neighborhood disadvantage. Unfortunately, due to missing data on all offender-level variables including offender race and the variable for retaliatory homicide, it is impossible to empirically characterize the nature of the missing data for these variables in the data set.

TABLE 2. MEANS AND STANDARD DEVIATIONS OF CENSUS TRACT-LEVEL NEIGHBORHOOD DISADVANTAGE VARIABLES (N=757)

	Offender Identified		
	No	Yes	$p>\|t\|$
Percent Below Poverty	26.49 (21.354)	26.36 (19.093)	0.941
Percent Unemployed	15.05 (12.297)	15.76 (11.441)	0.494
Median Family Income	29887.05 (16076.48)	28930.95 (15998.41)	0.483
Percent HH Receiving Public Assistance	19.13 (18.291)	20.36 (17.263)	0.419
Percent Female-Headed Households	23.06 (17.479)	24.74 (15.963)	0.248
Total Tract Population	3345.34 (2472.02)	3443.94 (2383.896)	0.635

Within the offender sample there are additional sources of missing data. I conduct the final analyses on a sample that was subjected to casewise deletion of observations that are missing data on relevant variables. Specifically, of the 9,240 offenders (excluding those in tracts with extremely low populations), 762 (8.25%) are coded as "unknown" on the variable primary causal factor. I then coded these observations as missing data for the outcome variable for retaliatory causal factor. Further, of the 8,478 for whom causal factors have been identified, an additional 243 (2.87%) are missing race data. Finally, the inclusion of eight control variables that are missing data to varying degrees decreases the overall size of the sample to 8,015 (86.09% of the total).

Measuring Retaliation

As noted above, revenge or retaliation can be conceptualized in many ways. Although a definition of retaliation that is based on Anderson's (1999) work is quite

broad, the data set I am using to test his theory uses a narrower conceptualization. Specifically, a homicide is only coded as retaliatory if it occurred in response to an earlier confrontation or an earlier predatory crime (Block, 1993: 187). This excludes many incidents that are retaliatory in the context of the code of the street, but may be a response to an insult or threat rather than to a distinct earlier event. "Code of the street" retaliatory homicides include those that are motivated by defense of the offender's honor or reputation. They may follow the mere perception of an insult or threat, either immediate or delayed. They are unlikely to be detected as retaliatory homicides in the Chicago data set and may have other causal factors recorded, such as some type of altercation. Underestimation of retaliatory homicides could bias the estimates obtained by regression analysis.

It is not clear if this bias would overestimate the magnitude of the relationship between the independent variables and retaliatory homicide, or provide a more conservative estimate. For example, if the undetected cases of retaliatory homicide were disproportionately likely to be committed by white people in affluent neighborhoods, the existing data would be biased in favor of Type I Error. In other words, the data would erroneously support the hypothesis that retaliatory homicides are more likely to be committed by black offenders in disadvantaged neighborhoods. Conversely, if the undetected cases supported the hypothesis that retaliatory homicides are more likely to be committed by black offenders in disadvantaged neighborhoods, hypothesis tests using the existing data would provide a conservative estimate of this relationship between race and neighborhood disadvantage, and retaliatory homicide. If undetected retaliatory

homicides are evenly distributed in terms of offender race and degree of neighborhood disadvantage, the estimates are not biased.

It is impossible to know the subtleties of motivation of the non-retaliatory homicides that might allow me to determine which of the hypothetical scenarios described above is more accurate. However, the data do allow for informed speculation on this matter, based on which primary causal factors are likely to represent undetected retaliatory homicides. In particular, in Table 3 I examine the primary causal factors of the 6,851 non-retaliatory homicides in the data set. The causal factors are ranked by the probability that the offender was black and the probability that the offender was white. I list the top fifteen causal factors of homicide most likely to be committed by a white offender and the top fifteen causal factors of homicide most likely to be committed by a black offender.

TABLE 3. PRIMARY CAUSAL FACTORS OF NON-RETALIATORY HOMICIDE RANKED BY PROBABILITY OF OFFENDER RACE

Primary Causal Factor	N	% Committed by a Black Offender	Primary Causal Factor	N	% Committed by a White Offender
Altercation over children	16	100.00	Mercy killing	7	57.14
Drive-by shooting	4	100.00	Blackmail	2	50.00
Victim was a prostitute	1	100.00	Suicide pact	4	50.00
Ransom	7	100.00	Mental disorder	44	29.55
Victim was a narcotics dealer	131	91.60	Altercation over liquor	33	24.24
Altercation over drugs	367	90.74	Insurance fraud	14	21.43
Altercation over gambling	43	88.37	Strongarm robbery	77	19.48
Unlawful use of a weapon	60	86.67	Burglary	28	17.86
Sexual rivalry	65	86.15	Sexual assault	73	17.81
Armed robbery	1052	85.84	Victim was a burglar	12	16.67
Altercation over money	434	85.02	Racial/hate altercation	14	14.29
Altercation over alleged theft	209	84.21	Traffic altercation	32	12.50
General domestic altercation	865	84.11	Sex altercation	78	11.54
Love triangle	154	82.47	Desert/Termination	31	9.68
Child abuse	212	82.08	Sexual rivalry	65	9.23

Compared to the list of causal factors most likely to lead to homicides by a white offender, the list of causal factors of homicides committed by a black offender is characterized by situations that are more likely to occur in disadvantaged neighborhoods. For example, the list for black offenders includes drive-byshootings, prostitution, drug - related homicide, and armed robbery. It also consists of several causal factors that could apply to a situation in which the offender was acting in retaliation to defend his honor or reputation. In particular, although 76% (n=5,208) of all non-retaliatory offenders in the data set are black, black offenders are responsible for 100% of drive-by shootings, 91.6% of cases in which the victim was a narcotics dealer, 90.74% of drug altercations, 86.15% of sexual rivalry cases, 85.02% of money altercations, and 84.21% of altercations over alleged theft. In contrast, white offenders represent 6.92% of non-retaliatory homicide offenders but are more likely to be responsible for homicides characterized by situations such as mercy killings (57.14%), blackmail (50%), suicide pacts (50%), mental disorder (29.55%), insurance fraud (21.43%), and traffic altercations (12.5%).

These values must be interpreted with caution, because several of the causal factor categories contain very few cases and therefore percentages are sensitive to minute differences in the number of offenders of a particular race. Furthermore, there is no objective measure of the likelihood that a particular causal factor represents a potentially retaliatory homicide. However, in general, blacks are disproportionately more likely to commit homicide as a result of situations likely to occur in disadvantaged neighborhoods that may involve retaliation, while whites are most likely to offend as a result of situations seemingly unrelated to retaliation or the code of the street. Thus, I am confident that my estimates of the relationship between race, neighborhood disadvantage,

and retaliatory homicide are not biased in favor of Type I Error. In fact, I believe these data provide a conservative test of the hypothesis that retaliatory homicides are more likely to be committed by black offenders in disadvantaged neighborhoods.

Reliability

The reliability of these data is most significantly limited by the coding of the data on the Murder Analysis Report by the police and the availability of information. As noted above, retaliation can be conceptualized in many different ways. The subjective practice of interpreting the causal factors of a homicide can seriously threaten the reliability of the data. However, several steps have been taken to preserve data reliability.

First, the definition of retaliatory homicide in this data set is fairly concrete. Retaliation refers to offenses in which the victim was killed in reaction to an earlier confrontation or an earlier predatory offense (Block, 1993). Although requiring a specific earlier confrontation may not capture all of the homicides that would be considered retaliatory in terms of the code of the street, it is relatively easy to interpret and relatively less subjective to identify. Furthermore, in 1982 a change to the format of the Murder Analysis Report expanded the causal factor variable from a short checklist to a detailed variable (Block and Block, 1992). I have limited this analysis to the time period 1985 to 1995 so all the incidents in the sample occurred after this change took place. Finally, Block and Block (1992) acknowledge that the coding of contextual variables required a great deal of close supervision and training, reliability checking, and the development of coding instructions. It is apparent that at each stage of the data

collection, the researchers took great care in cleaning and updating the data, and ensuring consistency in defining and coding variables (Block, 1993; Block and Block, 1992).

Method

To determine if there is a relationship between race, neighborhood disadvantage, and retaliatory homicide that supports Anderson's (1999) characterization of inner-city violence I will estimate two sets of regression models. Because the outcome variable, retaliatory homicide, is dichotomous I will use a binary-choice model that yields the log odds that a homicide is retaliatory under various circumstances, the logistic regression model.

The likelihood of a homicide occurring in a particular neighborhood is not independent of other homicides occurring in that neighborhood. As a result, the ordinary regression assumption of independent error terms may be violated, leading to the underestimation of standard errors and inaccurate inferences. Thus, all of the regression models discussed below are estimated with robust standard errors. This accounts for the possibility of clustering within census tracts and provides a more conservative test of the hypotheses.

The first set of models is designed to determine the linear effects of neighborhood disadvantage and offender race on retaliatory homicide (Hypotheses I and II). Model One includes retaliatory homicide regressed only on neighborhood disadvantage. Model Two includes retaliatory homicide regressed only on dichotomous offender race variables. Because it makes the most substantive sense to compare white offenders to non-white offenders, white is the reference category for offender race in these models.

Model Three allows neighborhood disadvantage and offender race each to predict retaliatory homicide while controlling for the other. Included in Model Four are the measures of neighborhood disadvantage, offender race, and control variables, including whether the offender was male, whether the victim was male, the offender's age, the victim's age, the number of offenders involved in the incident, the number of victims, dichotomous measures for each category of victim-offender relationship (VOR), dichotomous measures for year, and the total population of the census tract in which the incident took place, measured in thousands.

The second set of models is designed to assess the extent to which neighborhood disadvantage predicts retaliatory homicide differently for offenders of different races (Hypothesis III). Although this relationship is customarily evaluated using an interaction term in the models, the high proportion of black offenders in this data set yields an interaction term between race and neighborhood disadvantage that is highly collinear with the original neighborhood disadvantage variable (See Appendix C). This collinear relationship between neighborhood disadvantage and the interaction term makes it difficult to detect a relationship between either of these variables and retaliatory homicide. Instead, I estimate a set of models that assess the relationship between retaliatory homicide and neighborhood disadvantage for whites, blacks, and Latinos separately. I exclude the offender category Asian/other because of an insufficient sample size. The results of these multivariate analyses as well as bivariate analyses are presented in chapter five.

Chapter Five: Results

This chapter presents the results of bivariate and multivariate analyses. I begin by conducting bivariate analyses thatreveal clear differences between the characteristics of retaliatory homicides and non-retaliatory homicides. I then discuss the results of the logistic regression models that estimate the relationships between offender race and neighborhood disadvantage, and retaliatory homicide.

Bivariate Analysis

Table 4 displays the means for the independent variables conditioned on retaliatory homicide. I conduct one-tailed t-tests to determine if the differences between the means for retaliatory homicides and the means for non-retaliatory homicides are statistically significant. I use a one-tailed test throughout the analyses because of the distinct directionality of my hypotheses regarding the primary independent variables, race and neighborhood disadvantage. From these results, it is evident that there are stark differences between the characteristics of retaliatory homicides and non-retaliatory homicides.

Overall, the sample is characterized by a large proportion of black, non-Latino offenders (76.58%) and few white, non-Latino offenders (6.31%). Latino offenders make up 16.53% of the sample and only .57% of the offenders are Asian or some other race. That said, retaliatory homicides are more likely to have been committed by black offenders than non-retaliatory homicides. Non-retaliatory homicides are significantly more likely to have been committed by white offenders than retaliatory homicides. There

is no statistically significant difference in the proportions of retaliatory and non-retaliatory homicides committed by Latino offenders or Asian/other offenders.

According to these results, retaliatory homicide victims are more likely to be killed by males than victims of non-retaliatory homicide. Victims and offenders of non-retaliatory homicides are more likely to be family members, friends or business

TABLE 4. MEANS FOR INDEPENDENT VARIABLES CONDITIONED ON RETALIATORY HOMICIDE

	Retaliatory Homicide	
	No (N=6851)	Yes (N=1164)
White Offender	.069	.027***
Black Offender	.760	.799**
Latino Offender	.165	.169
Asian/Other Offender	.006	.004
Male Offender	.886	.964***
VOR: Spouse	.109	.003***
VOR: Child/Parent	.046	.005***
VOR: Other Family	.029	.008***
VOR: Friends	.036	.022*
VOR: Acquaintances	.273	.400***
VOR: Rival Gang	.157	.290***
VOR: Business/Work	.023	.007***
VOR: Illegal Business	.084	.039***
VOR: Stranger	.188	.173
VOR: Other	.054	.052
Number of Offenders	1.881	2.289***
Number of Victims	1.049	1.058
Offender Age	25.754	22.053***
Victim Age	30.157	24.851***
Percent Below Poverty	35.562	38.078***
Percent Unemployed	21.337	23.050***
Median Family Income	22241.03	20657.05***
Percent HH Receiving Public Assistance	29.449	32.211***
Percent Female-Headed Households	33.461	36.507***
Total Tract Population	4481.785	4258.372*

* Indicates a statistically significant difference across means at p<.05 level for a 1-tailed t-test
** Indicates a statistically significant difference across means at p<.01 level for a 1-tailed t-test
*** Indicates a statistically significant difference across means at p<.001 level for a 1-tailed t-test

associates, while retaliatory homicide victims and offenders are more likely to be either acquaintances or members of a rival gang. Retaliatory homicides and non-retaliatory homicides are equally likely to be committed by strangers. Retaliatory homicides involve more offenders, on average, than non-retaliatory homicide. The average age of both the offender and the victim is somewhat lower in the cases of retaliatory homicide. Finally, retaliatory homicides are more likely to take place in areas of greater neighborhood disadvantage than non-retaliatory homicides. On average, retaliatory homicides are found in areas with greater percent below poverty, greater percent unemployed, lower median family income, greater percentage of households receiving public assistance, and a greater percentage of female-headed households. See Appendix C for a correlation matrix of all the independent variables in the models.

These bivariate results strongly suggest that the dynamics of retaliatory and non-retaliatory homicide are different. They offer preliminary support for Anderson's (1999) characterization of the code of the street in that retaliatory homicides are more likely to be committed in disadvantaged neighborhoods by young, black males than non-retaliatory homicides. In addition they reveal considerable differences between victim-offender relationships in retaliatory and non-retaliatory homicides that make sense in the context of the code of the street. The fact that retaliatory homicides are more likely to be between acquaintances and rival gang members, while non-retaliatory homicides are likely to be between friends, family members, and business associates suggests that it is more important to command respect and establish a reputation for toughness among those who may be less familiar with you. Conversely, an offender may be less likely to

retaliate against friends, family, and business associates because they are the people most willing to help defend him in a time of need.

In the next part of the analysis, I use logistic regression models to further evaluate the differences between retaliatory and non-retaliatory homicides. In particular I assess whether the differences with respect to offender race and degree of neighborhood disadvantage persist when controlling for relevant covariates.

Logistic Regression Models

The results of the regression analyses are summarized in Tables 5 and 6. Table 5 shows the results of the four models that assess the direct effects of neighborhood disadvantage and offender race on the likelihood that a homicide is retaliatory. Model 1 indicates a significant increase in the likelihood that a homicide is retaliatory associated with higher levels of the neighborhood disadvantage measure that incorporates percent below poverty, percent unemployed, median family income, percent of households receiving public assistance, and percent of households that are headed by a female. Model 2, which includes only the offender race variables, indicates that both black (non-Latino) and Latino offenders are 2.6 times as likely as non-Latino whites to have acted in retaliation. This difference is statistically significant at $p<.001$ level in a one-tailed hypothesis test. In this model there is no discernable difference between offenders whose race was categorized as Asian/other and white offenders.

Model 3 includes both neighborhood disadvantage and offender race. When controlling for offender race, the statistically significant, positive effect of neighborhood disadvantage on the likelihood of a homicide being retaliatory remains. When

controlling for the effect of neighborhood disadvantage, black and Latino offenders are still significantly more likely than white offenders to be motivated by retaliation. However, the magnitudes of the relationships between neighborhood disadvantage and retaliatory homicide and offender race and retaliatory homicide have decreased slightly.

Finally, Model 4 includes neighborhood disadvantage, offender race, and a number of control variables. Note that although the control variables for year are included in this model, as well as Model 6, for the sake of brevity they are not reported in Table 5 or Table 6. The inclusion of the control variables causes the difference between Latino offenders and white offenders to disappear. However, the difference between white and black offenders remains statistically significant at a $p<.05$ level, as does the positive effect of neighborhood disadvantage. These findings offer support for Hypotheses I and II. In this model, a black offender is 1.681 times as likely as a white offender to be motivated by retaliation, controlling for other relevant factors. Adding the control variables to the model has substantially diminished the degree to which black offenders are more likely than white offenders to commit a homicide that is retaliatory. However, even when controlling for the effects of these variables, the strength of the relationship between neighborhood disadvantage and likelihood of retaliatory homicide has decreased only slightly. The effect of offender race initially weakened this relationship somewhat, but homicides in disadvantaged areas are more likely to be retaliatory than homicides in less disadvantaged areas, independent of offender race, victim and offender gender, victim and offender age, the number of offenders, the number of victims, the relationship between the victim and the offender, the census tract population, and the yearly homicide trend.

TABLE 5. REGRESSION RESULTS: RETALIATORY HOMICIDE (N=8015)

	Model 1			Model 2			Model 3			Model 4		
	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio
Neighborhood Disadvantage	.150**	.055	1.163				.124*	.060	1.132	.115*	.065	1.120
Black Offender				.973***	.225	2.645	.820***	.233	2.271	.519*	.259	1.681
Latino Offender				.950***	.233	2.587	.909***	.233	2.481	.388	.244	1.475
Asian/Other Offender				.591	.536	1.806	.593	.536	1.809	.251	.550	1.285
Male Offender										.315*	.188	1.370
Male Victim										.586**	.233	1.800
Offender Age										-.015**	.005	.985
Victim Age										-.024***	.005	.976
Number of Offenders										.081*	.040	1.084
Number of Victims										.178	.154	1.195
VOR: Spouse										-2.745***	.639	.064
VOR: Child/Parent										-2.187***	.554	.112
VOR: Other Family										-.992*	.453	.371
VOR: Friends										-.253	.281	.776
VOR: Acquaintance										.510***	.152	1.666
VOR: Rival Gang										.183	.176	1.201
VOR: Business										-.888*	.404	.412
VOR: Illegal Business										-1.048***	.256	.351
VOR: Other										-.401	.279	.669
Census Tract Population/1000										-.017	.017	.983
Wald χ^2	7.55			19.38			23.35			250.59		
Probability>χ^2=	.006			.000			.000			.000		
Pseudo R^2=	.0035			.006			.007			.121		

* Indicates statistical significance at p<.05 level (1-tailed test)

** Indicates statistical significance at p<.01 level (1-tailed test)

*** Indicates statistical significance at p<.001 level (1-tailed test)

TABLE 6. REGRESSION RESULTS: RETALIATORY HOMICIDE BY OFFENDER RACE

	Model 5									Model 6								
	White			Black			Latino			White			Black			Latino		
	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio	β	S.E.	Odds Ratio
Neighborhood Disadvantage	.087	.261	1.090	.124*	.063	1.132	.131	.198	1.140	-.222	.395	.801	.117*	.069	1.124	.028	.221	1.028
Male Offender										-.914	.571	.401	.370*	.203	1.448	.134	.687	1.144
Male Victim										1.878**	.703	6.541	.484*	.252	1.622	1.227	.787	3.410
Offender Age										.036*	.017	1.037	-.021***	.006	.980	-.005	.014	.995
Victim Age										-.036*	.019	.964	-.026***	.005	.975	-.007	.012	.993
Number of Offenders										.345**	.125	1.412	.099**	.048	1.104	.024	.072	1.024
Number of Victims										1.527**	.404	4.605	.041	.166	1.042	.732*	.382	2.079
VOR: Spouse										-1.292	1.169	.275	-2.833***	.609	.059	-	-	-
VOR: Child/Parent										-	-	-	-2.036***	.578	.130	-	-	-
VOR: Other Family										1.099	1.219	3.001	-1.073**	.487	.342	-	-	-
VOR: Friends										.664	.759	1.943	-.394	.333	.674	-.697	1.098	.498
VOR: Acquaintance										-.105	.748	.900	.536***	.170	1.710	.489	.396	1.631
VOR: Rival Gang										-.559	.901	.572	.166	.212	1.181	.452	.348	1.571
VOR: Business										.632	1.032	1.882	-1.582**	.628	.206	-.037	.684	.963
VOR: Illegal Business										.242	1.189	1.273	-1.066***	.263	.344	-2.153*	1.170	.116
VOR: Other										-.609	1.015	.544	-.310	.336	.733	-.564	.532	.569
Census Tract Population/1000										-.147*	.078	.863	-.013	.019	.987	-.029	.047	.971
N=	506			6138			1325			430			6138			1209		
Wald χ^2=	.11			3.38			.45			51.65			230.5			52.09		
Probability>χ^2=	.741			.050			.505			.001			.000			.001		
Pseudo R^2=	.000			.002			.001			.177			.134			.068		

* Indicates statistical significance at p<.05 level (1-tailed test)

** Indicates statistical significance at p<.01 level (1-tailed test)

*** Indicates statistical significance at p<.001 level (1-tailed test)

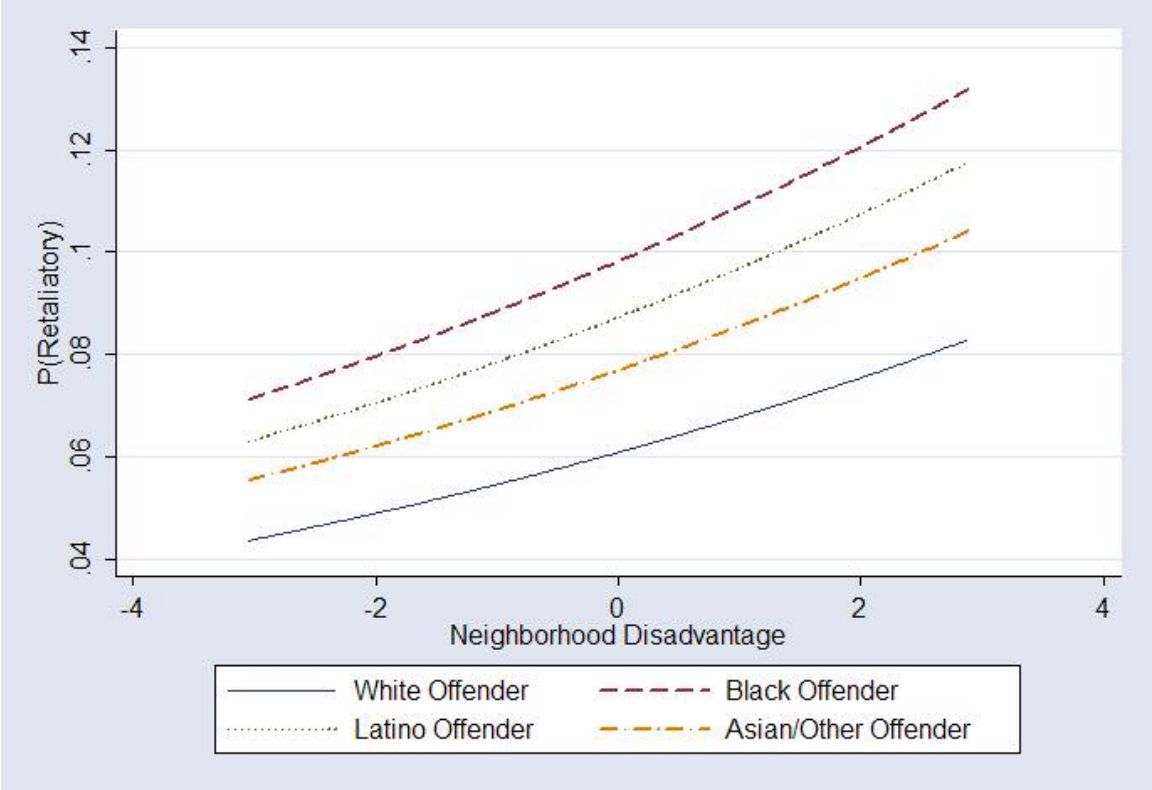
There are some interesting findings regarding control variables as well. Specifically, although male offenders are more likely than female offenders to be motivated by retaliation, the difference between male and female victims is even greater. In fact, these data indicate that males are 1.37 times as likely as females to kill in retaliation and 1.8 times as likely as females to be killed in retaliation. Furthermore, the age of both the offender and victim plays a role in that younger offenders are more likely to be motivated by revenge than older offenders and younger victims are more likely to be killed in revenge than older victims. Several elements of the victim-offender relationship variable are also predictive of retaliation. In fact, although homicides of spouses, children or parents, other family members, business partners and illegal business partners are considerably less likely to be retaliatory in nature than stranger homicides, acquaintances are considerably more likely than strangers to be killed in retaliation. Interestingly, the data reveal no significant difference in the likelihood that rival gang members are motivated by retaliation compared to strangers.

Table 6 shows the results of the models that assess the interactive effect of neighborhood disadvantage and offender race on the likelihood that a homicide is retaliatory. Model 5 estimates the direct effect of neighborhood disadvantage on retaliation for white (non-Latino) offenders, black (non-Latino) offenders and Latino offenders separately. It indicates that neighborhood disadvantage has no discernable capacity to predict retaliation for white offenders or Latino offenders. However, neighborhood disadvantage is positively correlated with retaliation when the offender is black.

When the control variables are added in Model 6 the relationships remain the same. There is still no discernable effect of neighborhood disadvantage on retaliatory homicide when the offender is white or Latino. In support of hypothesis III, black offenders are still significantly more likely to be motivated by retaliation if they are in neighborhoods with higher levels of disadvantage, though the inclusion of the control variables has weakened the effect somewhat. However, following the convention established by Paternoster et al. (1998) I conduct a hypothesis test on the significance of the difference between the neighborhood disadvantage coefficients for black offenders and white offenders. Although there is a significant effect of neighborhood disadvantage on retaliatory homicide for black offenders and not for white offenders, the difference between the coefficients for these two racial groups is not statistically significant. This weakens the support for hypothesis III; however the effects of race and neighborhood disadvantage independently on the likelihood that a homicide is retaliatory are clear. Figure 1 illustrates these effects by showing the change in the predicted probabilities of a homicide being retaliatory as neighborhood disadvantage increases for white offenders, black offenders, Latino offenders, and offenders categorized as Asian/other, with all other variables fixed at their means. These probabilities are based on Model 4.

There are several interesting findings regarding the control variables in the model disaggregated by race. First, note that due to insufficient sample sizes for white and Latino offenders, several categories of victim-offender relationship are not included in these models due to lack of variation in the dependent variable. Namely, there are no observations of retaliatory "child/parent" homicides for white or Latino offenders and there are no observations of retaliatory "spouse" or "other family" homicides for Latinos.

FIGURE 1. PREDICTED PROBABILITIES OF RETALIATORY HOMICIDE



The effect of offender gender on retaliatory homicide becomes statistically significant only for black offenders, but not white or Latino offenders. It is apparent that black males are 1.448 times as likely as black females to be motivated by retaliation. Additionally, male victims of white and black offenders are still more likely to be killed in revenge than female victims by a factor of 6.541 for white offenders, and 1.622 for black offenders. Offender age retains a statistically significant effect on retaliatory homicide for white offenders and black offenders but not Latino offenders. Notably, the effect of offender age on likelihood of retaliation for white offenders has reversed. Although younger black offenders are more likely to act in retaliation than older black offenders, with age the likelihood of a retaliatory motive actually increases for white offenders. Younger victims are more likely to be killed in retaliation when the offender

is white or black, but there is no detectable relationship between victim age and likelihood of retaliation for Latino offenders.

When the offender is black or white, more offenders increase the likelihood that a homicide is retaliatory. However, when the offender is white or Latino the number of victims is also relevant. In these cases, more victims increase the likelihood that the motive is retaliation, particularly if the offender is white. The relevance of victim-offender relationships described above in Model 4 remains the same for black offenders in Model 6. However, no statistically significant relationships are detected for victim-offender relationship variables for whites or Latinos, with the single exception that Latinos are more likely to kill strangers in retaliation than illegal business partners. The conspicuous absence of statistically relevant variables in the models for white offenders and especially Latino offenders indicates that many of the effects I found in the aggregated model are driven by the characteristics of homicides committed by black offenders. This is not particularly surprising, considering that black offenders committed the overwhelming majority of homicides in the data set. It is likely a manifestation of the second limitation of disaggregated data described above. Specifically, the inclusion of multiple categories of victim-offender relationship diminishes the power of the hypothesis tests as a result of insufficient sample sizes within categories.

These findings illustrate patterns of homicide with respect to race, neighborhood disadvantage, and retaliatory motives. The data indicate that homicides committed by blacks are more likely to be retaliatory than homicides committed by whites or Latino offenders. Furthermore, homicides committed in areas with greater neighborhood disadvantage are more likely to be retaliatory than homicides committed in areas with

less neighborhood disadvantage. In addition, the data reveal several variables that have different effects on retaliatory homicide depending on offender race. The analyses do not, however, detect a statistically significant disparity in the effect of neighborhood disadvantage on homicide motive for blacks and whites. These results have important implications for Anderson's Code of the Street (1999), which I discuss in Chapter Six.

Chapter Six: Discussion and Conclusion

In *Code of the Street* Anderson (1999) ethnographically develops a theory about the mechanism by which inner-city blacks come to be over represented among both victims and offenders of violence. He claims that the use of violence among blacks who live in disadvantaged neighborhoods stems from a distinct lack of faith in mainstream institutions, particularly the criminal justice system. As a result of this profound mistrust, a code of the street develops by which residents of neglected neighborhoods use violence to protect themselves by maintaining a reputation for retaliation that deters aggression.

The present research is designed to assess whether or not Anderson's (1999) observations are consistent with quantitative patterns of violence. I hypothesize that data supporting the code of the street theory would indicate a greater likelihood of a retaliatory motive among homicides committed by black offenders in disadvantaged neighborhoods. In particular, I test to see whether the effect of neighborhood disadvantage affects blacks and whites differently.

The results are mostly consistent with Anderson's (1999) ethnographic work. I find that higher levels of neighborhood disadvantage and having been committed by a black offender each significantly increase the likelihood of a particular homicide being retaliatory, as predicted by the code of the street. This remains true even when controlling for other relevant variables. Although the data do indicate that the statistically significant effect of neighborhood disadvantage remains only for black offenders when the model is estimated separately by offender race, the hypothesis tests lack the statistical power necessary to detect a difference for white offenders or Latino offenders.

Although Latinos were not the primary focus of this research, I must make note of the remarkable fact that there is no significant relationship between a Latino offender and the probability that a homicide was retaliatory when controlling for relevant variables. Furthermore, there is no statistically significant difference between the victim offender relationships "rival gang" and "stranger" with respect to the likelihood that a homicide is retaliatory. These two findings are counter-intuitive, given the high probability of Latino homicides in this data set being motivated by a gang altercation and the literature that suggests that retaliatory violence is in many ways the cohesive bond of a gang (Decker, 1996). Two possible reasons for this come to mind. First, the Latino offender variable is highly collinear with the rival gang VOR variable (r= 0.258). This may cause Type II Error and failure to detect an important relationship.

The other possible explanation for this finding is related to the coding of the data. Recall that the causal factors of the homicide are recorded on two variables: primary causal factor and secondary causal factor. The categorization of the causal factors is such that, by virtue of being a gang altercation-related homicide, an event is considerably less likely to be coded as a retaliatory homicide (See Appendix A). The reason for this is that there are several causal factors that could be coded for gang violence. Gang altercation is one of them, but others include drive-by shooting, altercation over drugs, victim was a narcotics dealer, or even contract killing. Of course, it is possible that any homicide can be characterized by multiple causal factors. They are certainly not mutually exclusive and there appears to be no structured order of operations on which the coding was based. However, the sheer number of definitive causal factors that could be associated with gang violence makes it less likely that a gang-related homicide would be coded as retaliatory in

favor of another causal factor. As a result, the data set could vastly underestimate the number of gang-related homicides that are retaliatory in nature and thus, fail to find a significant relationship between homicides among rival gang members and retaliation.

The difference between the effects of neighborhood disadvantage on homicide committed by black offenders and on homicides committed by white offenders is not statistically significant. However, to the extent that this is an unbiased or even conservative test due to the underestimation of retaliatory homicides, as discussed above, this finding weakens the support for Anderson's (1999) theory only slightly. There are several possible explanations for the lack of a statistically significant effect of neighborhood disadvantage on the probability of retaliatory homicide for white offenders. First, the hypothesis test could lack statistical power. Although a white sample size of 506 is not trivial, whites are severely underrepresented in the data set. A second possible explanation is that the variance of neighborhood disadvantage for whites is so low as to make it difficult to detect a significant effect. This is plausible, given that the variance of neighborhood disadvantage for homicides committed by white offenders is 0.3824, compared with 0.9746 for black offenders. Finally, it could be that there simply is no effect of neighborhood disadvantage for white offenders. In other words, consistent with the code of the street, retaliatory violence is the result of a cultural adaptation caused by a combination of structural deficits including both economic disadvantage and institutionalized racism.

The effects of offender race and neighborhood disadvantage on the likelihood that a homicide is retaliatory are fairly small in magnitude. When controlling for other relevant variables, black offenders are 1.681 times as likely as white offenders to commit

homicides that are retaliatory. This finding firmly supports Anderson's (1999) theory, particularly his characterization of the mechanism whereby racial discrimination by institutions such as the criminal justice system leads to adoption of the code of the street. Independent of the race effect, a one-unit increase in the neighborhood disadvantage scale (which ranges from -3.052 to 2.886) increases the odds that a homicide is retaliatory by a factor of 1.12.

Although race and neighborhood disadvantage demonstrate a substantively important effect on retaliatory homicide, I suspect that due to limitations of the data, the strength of these relationships is underestimated. In many ways the quality of the data is remarkable: they include numerous variables that capture many characteristics of homicide offenders and victims, they include detailed measures of offender motive, and they were carefully coded to ensure reliability over long periods of time (Block and Block, 1992). However, the definitions of retaliation used to code the data are limited to offenses in response to distinct conflicts (Block, 1993), which is not consistent with a definition that is informed by the code of the street (Anderson, 1999). Furthermore, the coding of causal factors is limited to two choices, among 52 overlapping possibilities. The resulting underestimation of retaliatory homicides in the tradition of the code of the street may undermine the prediction of a relationship between race, neighborhood disadvantage and retaliatory homicide. Ideally, a test of this relationship would be based on data coded in such a way that systematically identifies homicides that were motivated specifically by principles of the code of the street, rather than simply retaliation.

Implications for Research

Although these findings are consistent with the code of the street hypothesis, future research should attempt to rule out the possibility that the relationship between race, neighborhood disadvantage, and retaliatory homicide is not due to a mechanism other than the code of the street. For example, assessing these relationships could be a rudimentary test of Agnew's (1992) general strain theory. Agnew suggests that strain comes in many forms, including economic deprivation as well as the perception or reality of unjust outcomes. Strain caused by these variables leads to a great deal of anger and frustration. According to Agnew (1992), one form of adaptation to strain is retaliation.

To distinguish retaliation due to anger and frustration from retaliation due to self-preservation and defense of honor, a more detailed measure is necessary. Retaliatory homicide is an important part of the measure. However, to verify that self-preservation is the basis for retaliatory violence it needs to be tailored to capture the multi-faceted mechanism that distinguishes the code of the street from other theories. The item might include specific measures to assess ties to mainstream institutions (particularly faith in the criminal justice system), perceptions of threat, and prioritization of honor.

In some ways the relationship between offender race, neighborhood disadvantage, and retaliatory homicide does not capture the complexity of this mechanism. In particular, I do not assess whether the race of the offender is more or less relevant than the racial distribution of the neighborhood. Because of the high correlation between neighborhood disadvantage and geographically concentrated racial minorities it is exceedingly difficult to disentangle the independent effects these two variables have on retaliatory homicide. Future research should evaluate whether the code of the street

operates primarily at the individual level or at the neighborhood level. Another important topic for future research is the way in which the code of the street is culturally transmitted. This particular question has the most relevance for assessing the policy implications of the theory.

The present study supports and extends the findings of previous research on the code of the street. It is consistent with prior research in that the patterns of homicide I examine suggest the existence of a street code. In particular, I examine the role of offender race to determine whether the code of the street operates at the individual level. Moreover, my failure to find a statistically significant interaction between offender race and neighborhood disadvantage corroborates the finding of Baumer et al. (2003), who also find no evidence of different effects of neighborhood disadvantage on measures of the code of the street for offenders of different races.

The analyses presented above reveal thata number of variables affect the likelihood of retaliatory homicide differently (or possibly not at all) depending on the race of the offender. These results offer considerable support for the argument that homicide research benefits from the use of disaggregated homicide data. Whether data are disaggregated by offender race, motive, or location of the homicide, it is clear that correlates of homicide vary on several dimensions. Finding different correlates of homicide based on disaggregated data could yield important variation in policy implications. Additionally, disaggregating homicide data reduces the likelihood of erroneous findings due to conflicting effects of correlates canceling each other out in aggregated data. These results may also support the findings of McNulty and Bellair

(2003), who argue that different processes produce racial differences in violence, indicating the need for race-specific theories of offending.

Implications for Policy

Having found evidence supporting the existence of the code of the street by which blacks and residents of disadvantaged neighborhoods (often the same population) use violence as a tool of self-preservation, there are certain implications for criminal justice policy. According to the code of the street the most direct cause of violence is a lack of faith in the criminal justice system's commitment to protecting blacks and residents of disadvantaged communities. Therefore, it might seem reasonable to argue that changes in the criminal justice system that minimize racism and perceptions of injustice would minimize violence that is caused by the code of the street.

However, Anderson argues that the code of the street is socially transmitted. Its rules are taught to children by parents from a very young age and reinforced through interactions with others throughout life. This learning process does not take place in a vacuum, but rather in the context of concentrated poverty, isolation, and joblessness. Therefore, Anderson (1999) suggests that the most effective measures may be those that empower blacks and the poor with employment that earns a living wage. People in these communities need to be realistically trained for jobs and then given a chance by businesses. Anderson also suggests that in order for welfare-to-work programs to succeed, social isolation must give way to efforts that build social capital through community organizations. A viable legitimate economy in the inner-city will help end the social isolation of residents and end the cycle of poverty and alienation that allows the

code of the street to persist. Changing such longstanding conventions requires a critical mass of initiative and advocacy within the community. However, that inner-city violence operates through a cultural mechanism offers a greater opportunity for change than if it were caused by economic disadvantage alone.

Implications for Theory

Anderson's (1999) *Code of the Street* offers a multi-faceted explanation of violence in urban areas. It involves complex relationships between the economy of inner-city neighborhoods (including concentrated poverty and joblessness), racism, social and psychological alienation from mainstream institutions, respect, and violence. I have evaluated the extent to which this cyclical process explains patterns of violence in an urban area, by operationalizing the cycle in terms of neighborhood disadvantage, race, and retaliatory homicide. The results of the bivariate and multivariate analyses support the hypotheses that homicides committed by blacks or in disadvantaged neighborhoods are more likely to be retaliatory than those committed by whites or in less disadvantaged neighborhoods. This, in turn, supports the nature of the code of the street as described by Anderson (1999).

Support for a theory that incorporates structural concepts such as unemployment, poverty, and race, as well as cultural concepts such as social alienation and the value of respect, indicates that both structural and cultural variables are relevant to an understanding of lethal violence. Furthermore, the finding that a retaliatory motive is significantly related to neighborhood disadvantage and offender race reinforces the

argument that the situational details of an interaction have particular symbolic value in terms of understanding the correlates of lethal violence.

Appendix A: Causal Factor Coding

Altercation over children
Altercation over gambling
General domestic altercation
Altercation over liquor
Altercation over drugs
Altercation over money
Altercation over politics
Racial/hate altercation
Altercation over sex
Sexual jealousy
Gang altercation
Altercation over (alleged) theft
Drive-by shooting
Traffic altercation
Love triangle altercation
Sexual rivalry
Other altercation
Altercation over desertion/termination of relationship
Burglary
Armed robbery
Strong arm robbery
Sexual assault of women/men
Unlawful Use of a Weapon (including careless use of a weapon)
Organized crime
Victim is an arsonist
Victim is a burglar
Victim is a cartage thief
Victim runs a chop shop
Victim is a counterfeiter
Victim is a fence
Victim is a gambler
Victim is a loan shark
Victim is a narcotics dealer
Victim is a prostitute
Victim is a rapist
Victim is a robber
Arson victim
Attempted theft/shoplifting
Blackmail
Child abuse
Medical treatment
Deceptive practice
Escape
Insurance fraud
Victim intercede felony/fight
Mental disorder
Mercy killing
Ransom
Suicide pact
Retaliation
Contract killing
Contract arson

Appendix B: Factor Analysis for Neighborhood Disadvantage

TABLE 7. PRINCIPAL COMPONENT FACTORS: NEIGHBORHOOD DISADVANTAGE

Factor	Eigenvalue	Difference	Proportion	Cumulative
1	4.235	3.848	0.847	0.847
2	0.388	0.194	0.078	0.925
3	0.194	0.075	0.039	0.963
4	0.119	0.055	0.024	0.987
5	0.064	.	0.013	1.000

TABLE 8. FACTOR LOADINGS

Variable	Factor 1	Uniqueness
Percent Below Poverty	0.943	0.111
Percent Unemployed	0.929	0.138
Median Family Income	-0.855	0.269
Percent HH Receiving Public Assistance	0.965	0.069
Percent Female-Headed Households	0.907	0.178

Appendix C: Correlation Matrices

TABLE 9. CORRELATIONS BETWEEN NEIGHBORHOOD DISADVANTAGE, OFFENDER RACE, AND INTERACTIONS

		1	2	3	4	5	6	7	8	9
1	Neighborhood Disadvantage	1.000								
2	White Offender	-0.255	1.000							
3	Black Offender	0.409	-0.469	1.000						
4	Latino Offender	-0.284	-0.116	-0.805	1.000					
5	Asian/Other Offender	-0.075	-0.020	-0.137	-0.034	1.000				
6	Neighborhood Disadvantage* White	0.298	-0.838	0.394	0.097	0.017	1.000			
7	Neighborhood Disadvantage* Black	0.904	-0.052	0.110	-0.089	-0.015	0.043	1.000		
8	Neighborhood Disadvantage* Latino	0.367	0.082	0.572	-0.710	0.240	-0.069	0.063	1.000	
9	Neighborhood Disadvantage* Asian/ Other	0.086	0.017	0.119	0.029	-0.869	-0.014	0.013	-0.021	1.000

TABLE 10. CORRELATIONS BETWEEN INDEPENDENT VARIABLES

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Neighborhood Disadvantage	1.000																				
2	White Offender	-0.255	1.000																			
3	Black Offender	0.409	-0.469	1.000																		
4	Latino Offender	-0.284	-0.116	-0.805	1.000																	
5	Asian/Other Offender	-0.075	-0.020	-0.137	-0.034	1.000																
6	Male Offender	-0.083	0.015	-0.096	0.100	-0.002	1.000															
7	Male Victim	0.022	-0.070	-0.019	0.069	-0.009	0.042	1.000														
8	Offender Age	-0.022	0.122	0.020	-0.109	0.026	-0.153	-0.158	1.000													
9	Victim Age	-0.066	0.100	0.041	-0.117	0.021	-0.091	-0.084	0.327	1.000												
10	# of Offenders	-0.006	-0.029	-0.040	0.057	0.035	0.134	0.146	-0.316	-0.070	1.000											
11	# of Victims	-0.016	0.029	-0.004	-0.022	0.039	0.031	-0.055	0.005	0.010	0.023	1.000										
12	VOR: Spouse	-0.007	0.035	0.036	-0.063	-0.002	-0.372	-0.315	0.284	0.126	-0.198	-0.016	1.000									
13	VOR: Child/Parent	0.004	0.030	0.013	-0.033	-0.007	-0.143	-0.124	0.055	-0.136	-0.120	0.002	-0.066	1.000								
14	VOR: Family	-0.005	0.010	0.030	-0.044	0.019	-0.021	-0.028	0.071	0.083	-0.083	-0.006	-0.052	-0.033	1.000							
15	VOR: Friend	0.006	0.027	0.009	-0.027	-0.005	0.001	-0.013	0.096	0.043	-0.072	0.013	-0.061	-0.039	-0.031	1.000						
16	VOR: Acquaintance	0.083	-0.019	0.116	-0.119	-0.009	0.060	0.054	0.107	0.098	-0.120	-0.007	-0.206	-0.132	-0.104	-0.121	1.000					
17	VOR: Rival Gang	-0.054	-0.036	-0.209	0.258	0.017	0.141	0.161	-0.289	-0.294	0.228	0.001	-0.149	-0.095	-0.075	-0.088	-0.297	1.000				
18	VOR: Business	-0.047	0.038	-0.007	-0.022	0.024	0.017	0.016	0.079	0.139	-0.030	-0.004	-0.047	-0.030	-0.024	-0.028	-0.093	-0.067	1.000			
19	VOR: Illegal Business	0.061	-0.031	0.091	-0.080	-0.016	0.042	0.036	-0.044	-0.014	0.092	0.043	-0.093	-0.059	-0.047	-0.055	-0.185	-0.134	-0.042	1.000		
20	VOR: Other	0.002	0.015	-0.083	0.084	0.004	0.064	0.013	-0.120	-0.092	0.114	-0.003	-0.074	-0.049	-0.039	-0.045	-0.154	-0.111	-0.035	-0.069	1.000	
21	VOR: Stranger	-0.067	-0.003	0.008	-0.006	-0.007	0.077	0.056	-0.084	0.108	0.074	-0.012	-0.153	-0.098	-0.077	-0.090	-0.306	-0.221	-0.069	-0.138	-0.114	1.000

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